Vol. V

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1926

No. 357

ALBERT OTTINGER, AS ATTORNEY GENERAL OF THE STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK

FILED APRIL 30, 1926

(31,866)

(31,886)

SUPREME COURT OF THE UNITED STATES

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VOLUME V

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[fol. 3720] Astoria Light, Heat & Power Company, Astoria, Long Island

General Summary of Costs Upon a Sub-Contract Basis as of June 1, 1923

Structures		Total cost	Pages
"Z-2"	—Carbon Plant	$37,714 81	1- 2
"Z-15"	—Post Exchange	7,398 59	3
"Z-3"	—Storage Building	105,016 35	4- 5
"Z-9"	—Riggers Loft & Paint Shop	5,230 06	6
"Z-10"	—Locomotive Shed & Transf. House	51,744 58	7- 8
"Z"	—Cable Store House	514 62	9
"Z-22"	—Sulphate Storage Shed & Still Building	122,252 08	10- 11
"Z-23"	—Concrete Pit	25,409 33	12
"Z-24"	—Toluol Pump House	3,676 45	13
"Z-25"	—Toluol House	3,658 19	14
"Z-26"	—Laboratory	3,479 40	15
"B"	—Boiler House	40,966 15	16- 17
"B-I-N"	—Coke Bin	30,828 85	18
"B-I-S"	—Coke Bin	29,181 26	19
"B-H-N"	—Coke Bin	29,575 60	20
"B-H-S"	—Coke Bin	30,978 00	21
"C-H-H"	—Coal Elev. Tower & Pits	59,190 23	22- 23
"C-E-I"	—Coal Elev. Tower & Pits	63,714 88	24- 25
"D-C"	—Coal Unloading Conv. Pit. & Hse.	3,643 28	26
"D-F-H"	—Fuel Handling System	78,779 88	27- 28
"D-P"	—Purifiers, East Building	37,609 18	29
"D-P"	—Purifiers, West Building	49,528 73	30

General Summary of Costs—Continued

	Structures	Total cost	Pages
"D-T-E"	—Tar Extractor House	39,842 27	31- 32
"D-A-H"	—Ash Handling System	90,390 29	33
"D-G"	—Generator House	356,040 16	34- 36
"D-B"	—Boiler House	70,069 90	37- 38
"E-C"	—East Purifier House	256,098 46	39- 40
	—East Condenser House	65,722 70	41- 42
"E"	—Exhauster House	59,545 09	43- 44
"E-T-E"	—East Tar Extractor House	96,716 02	45- 46
"E-S"	—Electric Power Station	231,693 04	47- 48
	—Fire House #21	125 87	49
[fol. 3721]	—Fire House #23	129 03	50
	—Fire House #24	180 83	51
	—Fire House #31	155 72	52
	—Fire House #33	187 77	53
	—Fire House #41	125 87	54
	—Fire House #42	113 51	55
	—Fire House #43	195 80	56
	—Fire House #44	139 11	57
	—Fire House #47	112 57	58
	—Fire House #46	125 87	59
	—Fire House #127	141 28	60
"F-B-S"	—Fire Brick Storage Shed	28,842 62	61
	—Foamite Control Valve Houses, #1, 1 & 2, 2 & 3, 3 & 4, 4	1,603 88	62

"F-F-H-46"	—Foamite Hose House	160 57	63
"F-P-H"	—Foamite Pump House	2,780 21	64
	—Foot Bridge over Oil Pipe	321 17	65
"G-H"	—Gate House	2,931 94	66
"H-R"	—Horizontal Retort House	720,827 65	67- 69
	—Inclined Retort House	614,215 43	70- 72
"L"	—Chemical Laboratory	67,835 02	73- 75
"M"	—Meter House	53,620 28	76- 77
	—Mess Hall	89,739 63	78- 80
"N-S-P-H"	—North Shore Pump House	9,251 74	81
"O-P-H"	—Oil Pump House	9,303 21	82
	—Oxide Yard	21,345 98	83
"P"	—Photometer House	26,584 99	84- 85
"P-H-E"	—Ammonia Pump House	15,137 64	86- 87
"P-h"	—Tar Pump House	17,447 94	88
"R-L"	—Riggers Loft	7,969 35	89
"S-S"	—Track Scale House	864 16	90
"S-T-S"	—Track Scale House	2,228 72	91
"S-B-N"	—North Storage Shed	34,349 98	92
"S-B-S"	—South Storage Shed	38,341 48	93- 94
[fol. 3722]			
"S-O"	—Shop & Office	162,216 90	95- 97
"T-G"	—Track Gang Shed	4,395 70	98
"W-G-C-T"	—Coal Tanks	58,451 80	99
"S-P"	—West Purifier	244,733 38	100-101
"W-G-P"	—Purifier, East Bldg.	14,255 18	102

General Summary of Costs—Continued

Structures		Total cost	Pages
"W-G-P"	—Purifier, West Bldg.	21,093 30	103
"W-G-M"	—Meter House	107,615 86	104-105
"W-G-T-E"	—Tar Exhauster House	28,966 03	106-107
"W-C"	—West Condenser House	66,190 04	108-109
"W-T-E"	—West Tar Extractor House	96,377 69	110-111
"W-H"	—Wash House	59,353 46	112-113
"W-G-E"	—Exhauster House	93,015 46	114-115
"W-G-B"	—Boiler House	64,046 38	116
"W-G-P-H"	—Pump House	21,889 59	117-118
"W-G-P-H"	—Pipe Gallery	12,894 73	119
"W-G-G"	—Generator House	295,237 68	120-122
"X-M"	—Brick, Stone & Frame House	21,202 50	123-126
"X-P"	—Frame Stables & Sheds	2,720 64	127-128
"X-T"	—Residence	26,828 40	129-133
"X-U"	—Brick Stable	7,095 67	134-135
"X-V"	—Gardener's Dwelling	2,668 63	136
"X-L"	—Small Residence	8,650 91	137-138
"X-S-L"	—Steel Watch Towers	2,808 04	139
"X-F"	—Gateman's Lodge	5,770 29	140-141
"X-E"	—Bunk House	19,363 29	142-143
"X-25"	—Tar Pump House	1,111 08	144
"X-12"	—Wash Room	2,480 41	145
"X-C-F"	—Cyanogen Plant	15,031 70	146-147
"X-6"	—Tool House	1,665 77	148

"X-R"	—Stable	10,827 43	149-151
"X-C-S"	—Coal Sampling House	2,058 83	152
"X-35"	—Wash & Locker Room	5,047 75	153
"X-28"	—Tool House & Blacksmith Shop	1,380 53	154
"X-26"	—Tool & Pittings	350 89	155
"X-X-6"	—Pump House Well #6	976 17	156
[fol. 3723]			
"X-C"	—Garage Group	7,308 73	157-158
"X-Y"	—Hospital	1,964 78	159
"X-29"	—Gate House	575 20	160
"X-30"	—Gate House	940 85	161
"X-W-3"	—Pump House	2,175 02	162
"X-L-H-2"	—Locomotive House	2,497 04	163
"X-3"	—Field Office #4	143 08	164
"X-B-S"	—Storage Sheds	272 16	165
"X-C-S"	—Oil House	386 10	166
"X-7"	—Welding Shed	2,910 58	167
	—Paint Store House #101	1,130 28	168
	—Chicken House #102	450 34	169
	—Photometer House #103	286 39	170
	—Drill Rack #104	281 83	171
	—Privy & Ft. Bridge #105	112 88	172
	—Shed Under Sentry Tower #106	96 42	173
	—Hoist House #107	312 44	174
	—Privy #109	86 48	175
	—Clothes Shanty #114	89 93	176

General Summary of Costs—Continued

	Structures	Total cost	Page
	—Clothes Shanty #115	114 73	177
	—Steel Shelter #116	649 59	178
	—Tool House #117	457 63	179
	—Store House 118	60 29	180
	—Clothes Shanty #119	143 90	181
	—Privy #120	61 46	182
	—Shanty #121	80 71	183
	—Garage #122	317 71	184
	—Paint House #123	303 59	185
	—Blacksmith Shop #124	54 34	186
	—Carpenter Shop #125	715 77	187
	—Tool House #126	146 32	188
	—Privy #128	104 32	189
	—Gate House #130	1,185 92	190
	—Watch Tower #132	113 56	191
	—Frame Dynamo House #133	196 02	192
	—Privy #134	81 58	193
	—Store House (Old Scow Cabin) #136	259 15	194
	—Paint House #138	171 58	195
	—Temp. Transformer Hse. #140	166 08	196
[fol. 3724]	—Laboratory #141	561 45	197
	—Chicken House #142	1,110 18	198
	—Pits	33,936 08	199

—Sewers	192,292 17	200-201
—Electric Subway System	82,283 34	202
—Flag Staff	1,055 02	203
—Pavements	207,831 31	204
—Fences	29,375 16	205-206
—Foamite System	290 76	207
—Outside Fire Protection	11,912 38	208
Grand Total	$5,930,470 31	

NOTE.—No allowance made in the above for General Contractor's Expense and Profit, Administrative, Interest and Taxes, or other undistributed costs during construction.

NOTE.—The above totals include the amounts applied to the total costs of the respective structures, for Field Overhead, and for Building Contractor's Profit of 10%, both items as described in testimony of Henry R. Burt.

[fol. 3725] PLAINTIFF'S EXHIBIT No. 859

Astoria Light, Heat & Power Company, Astoria, Long Island

Expenditures Necessary to Put the Buildings of the Astoria Light, Heat & Power Company in the Condition in Which They Were When New

Structure		Total
"E-2"—Carbon Plant:		
Glazing	$100 00	
Exterior Woodwork	1,200 00	
Take up on Roof Trusses, and Plumb Walls	800 00	
Repairs Roof	300 00	
Replace Gutter & Leaders	183 00	
Paint Exterior	290 00	
		$2,873 00
"E-15"—Post Exchange:		
Exterior Woodwork and Glazing	70 00	
Porch Floor	120 00	
		190 00
"E-3"—Storage Building:		
Corr. G. I. Repairs	1,500 00	
Repair Door	50 00	
Glazing	230 60	
Repair Roof	600 00	
Paint Trusses & Purlins	200 00	
		2,580 00
"E-10"—Locomotive Shed & Transf. Hse.:		
Repair Sheet Metal Wk	60 00	
Point Brickwork	90 00	
Sash & Glass	315 00	
Repair Floor	460 00	
		925 00

Structure		Total
[fol. 3726] "E-22"—Sulphate Storage Shed, Bldg.:		
Reinforce Walls with Buttresses	$3,600 00	
Repair Galv. Iron	320 00	
Sash & Doors	90 00	
New G. I. Cutter	420 00	
Glazing	130 00	
Exterior Paint	550 00	
Paint Gratings	575 00	
		$5,685 00
"E-24"—Toluol Pump House:		
Painting & Glasing	170 00	170 00
"B"—Boiler House:		
Repair Brick Floor	530 00	
" Brickwork	340 00	
" Woodwork	280 00	
" Slate Roof	1,200 00	
Glazing	290 00	
Exterior Paint	225 00	
		2,865 00
"C-E-I"—Coal Elev. Tower & Pits:		
Glazing	20 00	20 00
"D-G"—Generator House:		
Brick & Slate	600 00	
Glazing	250 00	
		850 00
[fol. 3727] East Purifier House:		
Sash & Glass	$2,200 00	
Exterior Paint	160 00	
Repair Slate Roof	1,300 00	
		$3,660 00
"E"—Exhauster House:		
Repair Slate Roof	800 00	
Glazing	30 00	
Brick Pointing	180 00	
		1,010 00

Structure		Total
"E-T-E"—East Tar Extractor House:		
Slate Roof Repairs	600 00	
Misc. Woodwork	200 00	
Skylight Glass	800 00	
		1,600 00
"E-S"—Electric Power Station:		
Repair Exterior Brickwork	1,500 00	
Sash & Glass	750 00	
Repair Operating Devices	750 00	
" Brick Floor	400 00	
" Roof & Sheet Metal	3,500 00	
Paint Roof Trusses	225 00	
		7,125 00
"N-R"—Horizontal Retort House:		
Brick Pointing	1,100 00	
Pressed Steel Shutters	500 00	
Slate Roof	1,900 00	
Glazing	400 00	
		3,900 00
[fol. 3728] Inclined Retort House:		
Repair Slate Roof	6,400 00	
Point Brickwork	2,800 00	
Repair Louvres	1,400 00	
" T. C. Band Course	100 00	
" G. I. Shutters	780 00	
" Brick Floors	350 00	
		11,830 00
"M"—Meter House:		
Repaint Interior	150 00	150 00
Mess Hall:		
Repair Cutter	40 00	
Sash & Glass	110 00	
Marble Treads	80 00	
Interior Plaster & Paint	260 00	
		490 00

Structure		Total
"H-S-P-H"—North Shore Pump House:		
Exterior Paint	25 00	
Repair Siding	75 00	
" Gutters	42 00	
		142 00
"C-P-H"—Oil Pump House:		
Exterior Paint	80 00	
Repairs Siding	60 00	
		140 00
"P"—Photometer House:		
Point Brickwork	40 00	40 00
"P-H-2"—Ammonia Pump House:		
Sash & Glass	40 00	40 00
[fol. 3729] "P-H"—Tar Pump House:		
Glazing	$30 00	
Exterior Paint	40 00	
		$70 00
"S-B-N"—North Storage Shed:		
Doors & Woodwork	300 00	
Repair Siding	2,240 00	
		2,540 00
"S-B-S"—South Storage Shed:		
Doors & Woodwork	300 00	
Repair Siding	2,240 00	
		2,540 00
"S-O"—Shop & Office:		
Glazing	4,000 00	
Interior Plaster & Paint	225 00	
Misc. Hardware	150 00	
Misc. Woodwork	300 00	
		4,675 00
"T-G"—Track Gang Shed:		
Repair Siding	110 00	110 00

Structure		Total
"W-P"—West Purifier:		
Woodwork Repairs	350 00	
Glazing	1,900 00	
Repair Snow Guards, Gutter and Roof	300 00	
		2,550 00
"W-G-T-E"—Tar Extractor House:		
Skylight Glass	570 00	570 00
[fol. 3730] "W-T-E"—West Tar Extractor House:		
Skylight Glass	$540 00	
Brick Pointing	60 00	
Slate Roof Repairs	300 00	
		$900 00
"W-H"—Wash House:		
Interior Paint	200 00	
Woodwork, Sash & Glass	100 00	
Replace Marble Treads	112 00	
		412 00
"W-G-E"—Exhauster House:		
Point Brickwork	100 00	
Sash & Glass	130 00	
Exterior Paint	75 00	
		305 00
"W-G-B"—Boiler House:		
Sash & Glass	190 00	
Exterior Paint	130 00	
Repair Brickwork	100 00	
" Brick Floor	410 00	
" Slate Roof	200 00	
		1,030 00
"W-G-P-H"—Pump House:		
Glazing	20 00	20 00
"W-G-G"—Generator House:		
Glazing	300 00	300 00

Structure		Total
"X-M"—Brick, Stone & Frame House:		
Exterior Trim	100 00	
Plaster & Paint	300 00	
Fifteen Treads	23 00	423 00
[fol. 3731] "X-P"—Frame Stables & Sheds:		
New Roof	$150 00	$150 00
"X-T"—Residence:		
Exterior Paint	350 00	
Exterior Woodwork	200 00	
Interior Plaster Paint	160 00	
		710 00
"X-U"—Brick Stable:		
Exterior Paint	100 00	
Exterior Woodwork	150 00	
		250 00
"X-V"—Gardener's Dwelling:		
Exterior Woodwork	100 00	
Exterior Paint	75 00	
		175 00
"X-L"—Small Frame House:		
Exterior Paint	65 00	65 00
"X-F"—Gateman's Lodge:		
Painting	75 00	
Wood Saddles	3 00	
Repair Floor	60 00	
Fourteen New Treads	21 00	
		159 00
"X-E"—Bunk House:		
Exterior Paint	310 00	
Interior Paint	100 00	
Repair Exterior Trim.	800 00	
Repair Roof	450 00	
		1,660 00

	Structure	Total
[fol. 3732] "X-12"—Wash Room:		
Overhaul	$500.00	$500.00
"X-C-F"—Cyanogen Plant:		
Overhaul	6,000.00	6,000.00
"X-6"—Tool House:		
Overhaul	350.00	350.00
"X-R"—Stable:		
Repair Exterior Woodwork and Doors	600.00	
Roof	200.00	
New Treads	22.00	
New Floor	300.00	
Paint	355.00	
		1,477.00
"X-35" Wash & Locker Room:		
Exterior Woodwork	90.00	
Plumb Walls	50.00	
Exterior Paint	45.00	
		185.00
"X-28"—Tool House & Blacksmith Shop:		
Overhaul	590.00	590.00
"X-G"—Garage Group:		
Overhaul	2,200.00	2,200.00
"X-Y"—Hospital:		
Door Sill	15.00	
Exterior Paint	30.00	
" Woodwork	170.00	
		215.00
[fol. 3733] "X-W-3"—Pump House:		
Roof	$15.00	
Sash & Glass	70.00	
Exterior Paint	70.00	
		155.00

PLAINTIFF'S EXHIBIT NO. 860.

LUYSTER CREEK BULKHEAD WALL - ASTORIA LIGHT, HEAT AND POWER COMPANY.

Estimated Cost of Reproduction as of June 1st, 1923, on a sub-contract basis.

	Unit	QUANTITY	LABOR RATE	MATERIAL RATE	LABOR	MATERIAL	TOTAL
1. Piles	No.	3,412	6	17	20,472	58,004	78,476
2. Brace Piles	"	554	15	20	8,310	11,080	19,390
3. Fender Piles	"	294	12	20	3,528	5,880	9,408
4. 8x12" Sheet Piling	FBM	234,000	36	62	8,424	14,508	22,932
5. Splines for Sheet Piling	"	20,000	60	50	1,200	1,000	2,200
6. Other Timber	"	225,000	50	56	11,250	12,600	23,850
7. Concrete Slab	cu.yd.	2,110	2 50	6	5,275	12,660	17,935
8. Concrete wall	"	3,715	2	5	7,430	18,575	26,005
9. Reinforcing rods	lbs.	124,000	03	032	3,720	3,968	7,688
10. Bolts, spikes, washers, etc.	"	76,000	01	05	760	3,800	4,560
11. Form Lumber	FBM	80,000	40	55	3,200	4,400	7,600
12. Placing Slab form	sq.ft	33,640	12		4,036.80		4,036.80
13. Placing and Removing wall form	"	24,200	30		7,260		7,260
14. Mooring Posts	lbs.	2,050	02	045	41	92 25	133.25
15. 18 Single Bitts	"	16,000	02	045	320	720	1,040
16. Wire Cable & Staples	lin.ft	75	12	25	9	18 75	27.75
17. 7/8x30" Richmond Screw Anchors	No.	600	50	70	300	420	720
18. 7/8x24" Richmond Screw Anchors	"	610	50	60	305	366	671
19. #16 Tie Wire	lbs.	250		05		12 50	12.50
					85,840.80	148,104.50	$233,945.30
	Towing, Scow hire, etc.						5,000.00
	Employers & Public Liability		4.2896				3,682.15
							$242,627.45
	Overhead 10%						24,262.78
	Sub-contractors Profit 10%						24,262.75
							$291,152.98
	Bulkhead Wall:						
	Rip rap	30,689.6	cu.yd. @	$3.			92,068.00
	Dredging	140,815	" "	1.			140,815.00
	Fill	11,427	" "	.40			4,570.00
					Total		$228,605.00

The work estimated includes the construction of the wall, together with the necessary dredging and supporting rip rap and the fill above the lower sections of the structure. No channel dredging or fill in rear of the bulkhead wall is included.

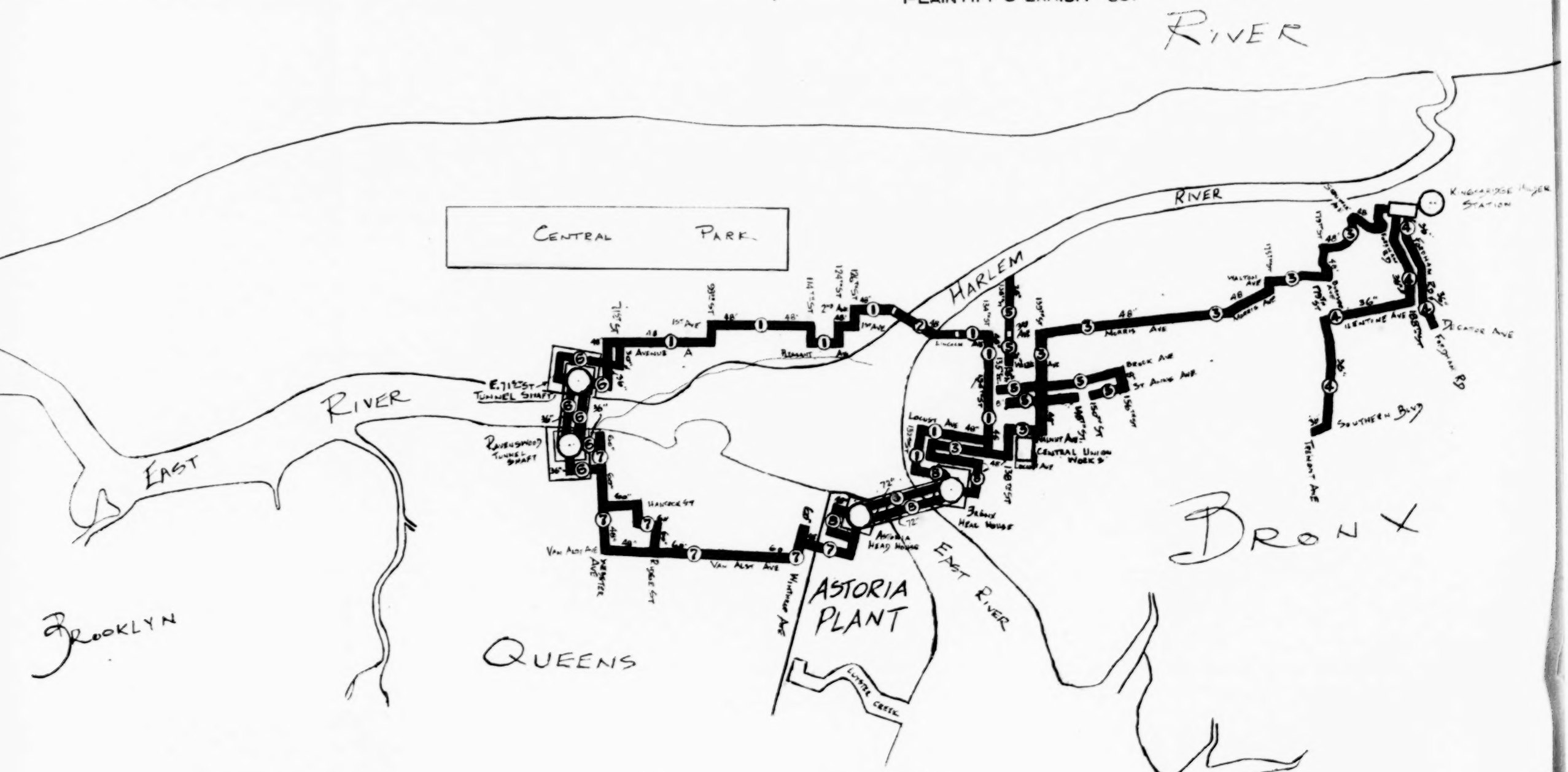
The estimates do not include the costs of the following items:

(a) Legal expenses
(b) Administration expenses
(c) Land and easements
(d) Taxes
(e) Financing of project and interest thereon

We estimate the period required for construction at one year.

3735

PLAINTIFF'S EXHIBIT *861

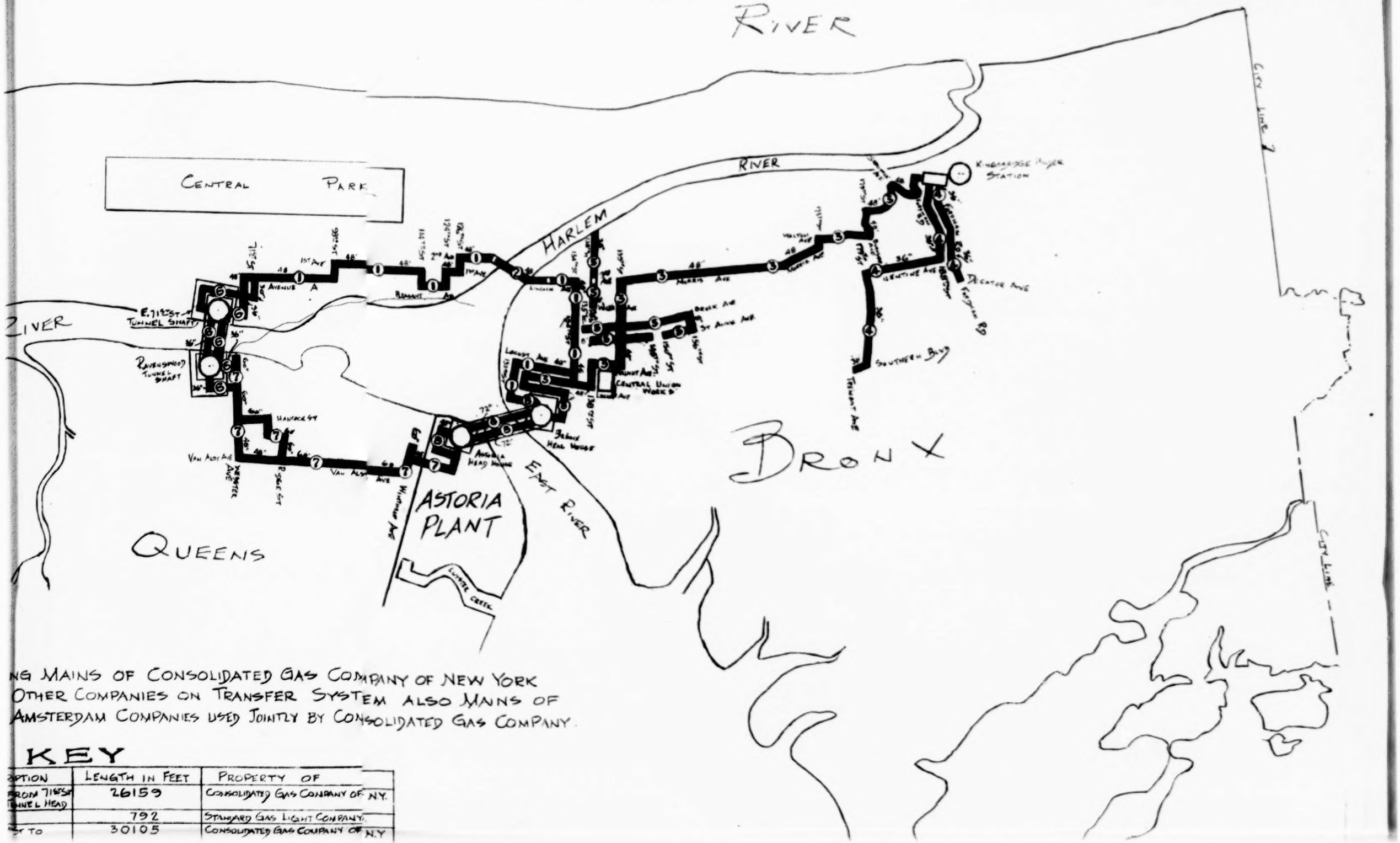


KEY MAP SHOWING MAINS OF CONSOLIDATED GAS COMPANY OF NEW YORK USED JOINTLY BY OTHER COMPANIES ON TRANSFER SYSTEM ALSO MAINS OF STANDARD AND NEW AMSTERDAM COMPANIES USED JOINTLY BY CONSOLIDATED GAS COMPANY.

KEY

KEY NO	SIZE AND BRIEF DESCRIPTION	LENGTH IN FEET	PROPERTY OF
1	48" CONNECTING MAIN FROM 71ST ST TUNNEL HEAD TO 132ND ST TUNNEL HEAD	26159	CONSOLIDATED GAS COMPANY OF N.Y.
2	48" RIVER MAIN	792	STANDARD GAS LIGHT COMPANY.
3	48" TRUNNED MAIN FROM 132ND ST TO	30105	CONSOLIDATED GAS COMPANY OF N.Y.

PLAINTIFF'S EXHIBIT #861



NG MAINS OF CONSOLIDATED GAS COMPANY OF NEW YORK
OTHER COMPANIES ON TRANSFER SYSTEM ALSO MAINS OF
AMSTERDAM COMPANIES USED JOINTLY BY CONSOLIDATED GAS COMPANY.

KEY

PTION	LENGTH IN FEET	PROPERTY OF
ROM 71ST NNEL HEAD	26159	CONSOLIDATED GAS COMPANY OF N.Y.
	792	STANDARD GAS LIGHT COMPANY.
T TO	30105	CONSOLIDATED GAS COMPANY OF N.Y.

KEY

KEY NO	SIZE AND BRIEF DESCRIPTION		LENGTH IN FEET	PROPERTY OF
1	48" CONNECTING MAIN FROM 71ST ST TUNNEL HEAD TO 132ND ST TUNNEL HEAD		26159	CONSOLIDATED GAS COMPANY OF N.Y.
2	48" RIVER MAIN		792	STANDARD GAS LIGHT COMPANY
3	48" TRANSFER MAIN FROM 132ND ST TO KINGSBRIDGE		30105	CONSOLIDATED GAS COMPANY OF N.Y
4	36" DISTRIBUTION MAINS IN THE BRONX FROM KINGSBRIDGE HOLDER TO CENTRAL UNION AND NORTHERN UNION DISTRIBUTION SYSTEMS		204065	CONSOLIDATED GAS COMPANY OF N.Y
5	CONSOLIDATED GAS COMPANY'S SMALL MAINS IN THE BRONX	8" 20" 24"	9935 1546 1773	CONSOLIDATED GAS COMPANY OF N.Y
6	RAVENSWOOD TUNNEL MAINS AND CONNECTIONS	36" 30"	6035 59	NEW AMSTERDAM GAS COMPANY
7	60" AND 48" TRANSFER MAINS IN LONG ISLAND CITY FROM RAVENSWOOD TO ASTORIA TUNNEL	60" 48"	14365 4473	NEW AMSTERDAM GAS COMPANY
8	ASTORIA TUNNEL MAINS AND CONNECTIONS	72" 48"	10313 371	NEW AMSTERDAM GAS COMPANY

Structure		Total
"X-L-H-2"—Locomotive House:		
Overhaul	600 00	600 00
"X-3"—Field Office #4:		
Overhaul	70 00	70 00
"X-O-S"—Oil House:		
Repair Galv. Iron	10 00	10 00
"X-7"—Welding Shed:		
Woodwork Repairs	60 00	60 00
Frame Dynamo House #133:		
Overhaul	98 00	98 00
Store House (Old Scow Cabin) #136:		
Overhaul	125 00	125 00
Grand total—9 Sheets		$78,534 00

[fol. 3734] (Here follow Plaintiff's Exhibits Nos. 860 and 861, marked side folio pages 3735 and 3736.)

PLAINTIFF'S EXHIBIT No. 862

[fol. 3737] Reproduction Cost of Labor and Material Necessary for the Laying of the Mains of the Consolidated Gas Company of New York Which are Used in Whole or in Part by Other Companies as of June 1st, 1923

Mains as described in Woods' report	Size	Length in feet		Reproduction cost as of June 1, 1923
		Manhattan	Bronx	
48" Connecting Main	48"	18,581 0	7,578 0	$1,471,190 00
36" Distributing Mains in Bronx	36"	.....	20,406 5	658,487 04
48" Transfer Main in Bronx	48"	.....	30,105 0	1,556,588 00
Consolidated Gas Co.'s small Main in Bronx	8"	.....	9,935 0	104,269 69
	20"	.....	1,546 0	
	24"	.....	1,773 0	

NOTE 1.—The above figures include Reproduction Cost of Pavement Paid for by Company over mains, pavement inspection and permits and city inspection and employees and public liability insurance on labor.

NOTE 2.—The foregoing is exclusive of necessary charges for engineering, superintendence and contractor's profit, administrative, legal, engineering and miscellaneous general expense during construction, interest during construction on mains, and other undistributed structural cost.

NOTE. 3—For unit labor and material costs for each size see Plaintiff's Exhibit 268.

[fol. 3738] PLAINTIFF'S EXHIBIT No. 863

Consolidated Gas Company of New York

Derivation of Working Capital, Taxes, and Overheads as of June 1st, 1923

Huntley Value of Land

Apparatus, Holders, etc	$18,198,605
Omissions & Contingencies, 5%	909,930
Buildings	8,937,610
Mains	37,075,233
	$65,121,378
Engineering, 13%	8,465,779
	$73,587,157
Administration, 2½%	1,839,679
	$75,426,836
Interest on Construction, 8% above total	$6,034,147
Interest on Land, 16% Land ($13,959,150)	2,233,464
Interest on Organization, 16% Organization ($6,600,000)	1,056,000
	$9,323,611
	$75,426,836
Land	13,959,150
Services	5,557,284
Meters	6,914,245
Gas Appliances	6,163,245
General Equipment, Office, Stable, Scows (Books)	831,523
Tools & Implements (Books)	202,363
Laboratory Equipment (Books)	23,905
Working Capital	6,900,000
Organization approximately 5% of Total less Financing	6,600,000
Financing approximately 5% of Total	6,900,000
Taxes (See Below)	851,089
	$130,329,640
	9,323,611
	$139,653,251

Working Capital—Total Gas Sales 1923, 24,057,694,200 @ .20 per M	$4,811,538 84
Gas Sales 1923 of:	
Gas Mfrd. by Cons. Gas Co. 9,350,814,300 @ .20 per M	1,870,162 86
Rental Appliances in Stock	250,000 00
	$6,931,701 70
Say	$6,900,000

Taxes

Assessed value of land—$11,233,642 @ $2.74—2 yrs	$615,604
Assessed value of impr.—17,188,710 @ 2.74—½ yr	235,485
	$851,089 00

[fol. 3739] PLAINTIFF'S EXHIBIT No. 864

Consolidated Gas Company of New York

Derivation of Working Capital, Taxes, and Overheads as of June 1st, 1923

Stevens' Value of Land

Apparatus, Holders, etc	$18,198,605
Omissions & Contingencies, 5%	909,930
Buildings	8,937,610
Mains	37,075,233
	$65,121,378
Engineering, 13%	8,465,779
	$73,587,157
Administration, 2½%	1,839,679
	$75,426,836

Interest on Construction, 8% above total	$6,034,147
Interest on Land, 16%—Land ($13,608,125)	2,177,300
Interest on Organization, 16% Organization ($6,600,000)	1,056,000
	$9,267,447
	$75,426,836
Land	$13,608,125
Services	5,557,284
Meters	6,914,245
Gas Appliances	6,163,245
General Equipment, Office, Stable, Scows (Books)	831,523
Tools & Implements (Books)	202,363
Laboratory Equipment (Books)	23,905
Working Capital	6,900,000
Organization approximately 5% of Total less Financing	6,600,000
Financing approximately 5% of Total	6,900,000
Taxes (See Below)	851,089
	$139,246,062
Working Capital—Total Gas Sales 1923, 24,057,694,200 @ .20 per M	$4,811,538 84
Gas Sales 1923 of:	
Gas Mfrd. by Cons. Gas Co. 9,350,814,-300 @ .20 per M	1,870,162 86
Rental Appliances in Stock	250,000 00
	$6,931,701 70
Say	$6,900,000

Taxes

Assessed value of land—$11,233,642 @ $2.74—2 yrs	$615,604
Assessed value of impr.—17,188,710 @ 2.74—½ yr	235,485
	$851,089 00

[fol. 3740] PLAINTIFF'S EXHIBIT No. 865

Expenditures Necessary to Put the Stations and Holder Stations of the Consolidated Gas Company in the Condition in Which They Were When New

[fol. 3741] Consolidated Gas Company

Summary of Stations and Holder Stations

Stations	Cost as of June 1, 1923
11th Street	$187,367 16
21st Street	201,784 32
99th Street	37,768 96
Total for Stations	$426,920 44
Total for Holder Stations	119,486 62
Total for Stations and Holder Stations	$546,407 06

[fol. 3742] Consolidated Gas Company—11th Street Station

Summary

Apparatus	Cost as of June 1, 1923
Blower Room (C)	$912 33
Boiler House (B)	140 51
Boiler House (B-1)	34 25
Boiler Room (B-2)	943 37
Boiler House (B-3)	187 18
Coal Handling Apparatus	2,275 23
Condenser House (D-1)	65,161 92
Condenser House (G)	29,519 12
Engine and Blower Room (C-1)	238 96
Exhauster Room (L)	68 26
Generator House (A)	1,345 05
Generator House (A-1)	21,798 47
Machine Shop (L)	21 18
Machine Shop (M)	46 71
Oil Pump House (E-2)	106 03
Pump House E. of Q-1	19 68
Pump Room (C-1)	165 12

Apparatus	June 1, 1923 Cost as of
Pump Room (V)	48 41
Purifier House (O)	16 48
Purifier House (P)	117 85
Shaving Scrubber House (H)	4 97
Shaving Scrubber Room (M)	40 65
Store Room (M)	106 72
Office Building (L)	59 40
Water and Tar Pump House (E)	106 59
Yard	5,519 72
Holders	55,363 00
Miscellaneous	3,000 00
Total	$187,367 16

[fol. 3743] Consolidated Gas Company—21st Street Station

Summary

Apparatus	Cost as of June 1, 1923
Riggers Storage (G)	$11 68
Generators (Hg)	381 05
Operating Floor (Hg)	63,316 20
Exhauster Engine & Blower Room (H-4)	6,271 84
Machine Shop & Store Room (H-2)	63 50
Boiler Room (H-B)	2,339 02
Condensers (H-C)	77,906 52
Shops & Pumps (H-S)	54 64
Salt Water Pump House (H-S)	73 96
Pump House (M)	55 82
Round House	27 23
Yard Tanks	3,801 53
Coal House V #1	396 00
De Coal Hoist	702 54
Storage Shed V #2	35 58
Storage Shed V #3	476 00
Storage Shed V #4	275 40
Storage Shed V #5	223 00
Storage Shed V #6	4,740 82
Purifying House #2 V	47 96
Purifiers & Scrubbers T	18 10

Apparatus	Cost as of June 1, 1923
Purifying House #1 R	62 03
Meter House (O)	12,500 00
Exhauster & Engine House (W)	3,918 90
Relief Holders	1,298 00
Commercial Holders	19,787 00
Miscellaneous	3,000 00
Total	$201,784 32

[fol. 3744] Consolidated Gas Company—99th Street Station

Summary

Apparatus	Cost as of June 1, 1923
Boiler Room "A-1"	$1,086 74
Condenser and Scrubbers "K"	67 09
Engine Room "A"	744 04
Exhauster "L"	18 75
Coal Handling Apparatus Dock "D-C"	578 80
Generator House "A-2"	7,567 98
Purifiers "E"	75 01
Retort House	17 91
Scrubbers "A-4"	1 94
Shop and Pump House "A-1"	318 12
Tar Pump Pit	128 24
Accumulator House "A-1"	56 13
Yard	1,251 21
Holders	23,857 00
Miscellaneous	2,000 00
Total	$37,768 96

[fol. 3745] Consolidated Gas Company—Holder Stations

Summary

	Cost as of June 1, 1923
East 15th½ Street	$1,199 64
East 111th Street	48,261 87
West 44th Street	4,268 92
West 65th Street	46,735 23
West 132nd Street	12,164 24
Kingsbridge	6,856 72
Total	$119,486 62

[fol. 3746] Consolidated Gas Company—11th Street Station

Blower Room "C":

No. 16 B. F. Sturtevant Blower driven by 18½" x 24" Buckeye Horizontal Steam Engine:			
Rebore cylinders, new pistons and rods and overhaul	$492.49		
Replace Belt (Double Ply Leather) 22" wide	418.18		
		$910.67	
Pipe Repairs, Small Piping: Repack 1 valve and Replace 0' 5" of pipe		1.66	
			$912.33

Boiler House "B":

Aultman & Taylor Horizontal Water Tube Boilers—4 Tubes—252—4" dia. x 16' 0" long, Works Nos. 1, 2, 3 & 4:			
Brick up Ash door with fire brick #2 Boiler	4.03		
Replace 8 tubes #2 Boiler	76.80		
Weld 2 cracks in Cast Iron header including the removing and replacing of Caps #2 Boiler	12.00		
Replace 1 side of Cast Iron Ash Door 17" x 19"	5.02		
		97.85	
Pipe Covering: 26' 0" of Std. Magnesia Pipe Covering with Canvas		41.02	
Pipe Repairs, Small Piping: Repack 3 valves		1.64	
			140.51

[fol. 3747] Boiler House "B-1":

Aultman & Taylor Horizontal Water Tube Boilers—2 Tubes—240—4" dia. x 18' 0" long Works Nos. 10 & 11:			
Weld cracks in Cast Iron door plate	$6.00		
Point up 20 sq. ft. of brickwork with High Templte	2.35		
		$8.35	
Pipe Covering: 12' 0" of Std. Magnesia Pipe Covering with Canvas		12.43	
Pipe Repairs, Small Piping: Repack 1—Valve; Replace 1—E11 and 2—Unions		13.47	
			$34.25

Consolidated Gas Company—11th Street Station—Continued

Boiler Room "B-2":

75 H. P. Hazelton Boiler—1 Porcupine Type Works No. 5:			
Replace 4 steel cover plates 7' 0" x 4' 2" x 1/16"	44.40		
Replace fire brick lining on furnace Size—8' 6" x 8' 6" x 2' 0" high, 8" thick	147.98		
Replace Steel cone ¼" thick	37.51		
		229.89	
100 H. P. Hazelton Boiler—1. Porcupine Type, Works No. 6:			
Replace Fire Brick lining on furnace Size—8' 6" x 8' 0" x 2' 0" high, 8" thick	147.91		
Replace Steel cone ¼" thick	37.51		
		185.42	
Parsons Forced Draft System for above boilers: Replace		514.60	
Steel Stack, 2' 0" dia. x 30' 0" high—2. Paint		8.28	
Pipe Covering: 7' 6" of Std. Magnesia Pipe Covering with Canvas		5.18	
			943.37

[fol. 3748] Boiler House "B-3":

Babcock & Wilcox Horizontal Tubular Boiler—1. 294—4" Tubes 18' 0" long:			
Point up 10 sq. ft. brickwork with High Tempite	81.18		
Replace 8 grate fingers C. I. 32 each	2.16		
Replace one T bar in grate	.25		
		83.59	
Pipe Covering: 140' 0" of Std. Magnesia Pipe Covering with Canvas		181.95	
Pipe Repairs, Small Piping: Repack 2 valves		1.64	
			$187.18

Coal Handling Apparatus:

Cinder Mill driven by Porter Horizontal Engine, Size—7" x 10", No. 4004:			
Overhaul eccentric strap and valve rod bracket	5.84		
Replace 5' 0" of steel chute	40.10		
		45.94	
Mast & Gaff, Hallberg Construction complete with steel structure, bucket fittings and rope: Replace bucket		810.00	
5" x 6" Double Cylinder Single Drum Hoisting Engine: Overhaul		23.36	
Portable Hopper (wood steel lined)—2. Size—6' 0" x 6' 0": Replace		241.00	
Portable Conveyors—2. Size—24" x 30' 0" long:			
Replace motor pinions—2	15.84		
Replace Guide Roller Cast Iron	5.92		
Replace 4 steel plate ¼" thick	7.05		
		28.81	

Portable Conveyor—1. Size—24" x 52' 0" long:			
Replace pinion on motor	7.42		
Overhaul	11.68		
		19.10	
Stiff Leg Derrick 65' 0" boom, wooden members, including housing, hoisting cable, guy ropes & 2 [illegible] clamshell buckets: Overhaul		649.56	
Coal Receiving Hopper. Size—16' 0" x 15' 0" x 14' 0": Replace steel plates		879.56	
Industrial Cableway 944' 0" long 1,200' 0" ½" cable—6 cars: Repair 1 car, renewing steel plates		4.76	
12" x 12" Lambie Cylinder, double drum Ledgerwood Hoisting Engine—1: General overhaul		106.27	
Vertical Stationary Boiler 5' 0" dia. drums 170—3" tubes 8' 0" long: New cast iron top		17.35	
8" x 10" Lambie Cylinder, double drum Hoisting Engine Made by The Bartlett Hayward Co.:			
New pinion on Main Drive Shaft	828.68		
New friction lining	14.87		
New liners under crosshead shoes—2	6.38		
New steel piston rods—2	31.68		
		81.61	
10" x 12" Ledgerwood double cylinder single drum Hoisting Engine: General overhaul		106.27	
Skip Hoist complete with 8½" x 8" single drum hoist, skip hoist guides, chute, rope, bucket, etc.:			
Replace steel plate		91.50	
			$2,275.23
Condenser House "D-1":			
9" x 12" x 14" Hawbleon Pump—1. Serial No. 3453:			
Replace pins—2	4.92		
Replace bushings—2	7.84		
Adjust valve shaft	2.92		
Reseat	8.20		
Replace water end complete	310.04		
		334.08	
[illegible] 18" x 10" x 20" Gould & Garrison Pumps—2. Serial Nos. 2F-2549 & Unknown:			
Replace pins—2 (2F-2549)	84.92		
Replace bushings—2 (2F-2549)	4.92		
Replace nuts on foundation—2 (2F-2549)	.88		
Reseat (2F-2549)	8.20		
Overhaul (Pump 2 Unknown)	17.32		
		236.68	
Cast Iron Salt Water Condensers—3. 40 section 2650—3" dia. tubes 12' 1" long: Retube 3		64,782.63	
Pipe Covering: 8' 0" of 8½ Magnesia Pipe Covering with Canvas		6.40	
Pipe Repairs, Large Piping: Repair 1 H. S. Joint & Caulk Seam		2.21	
			$65,161.92

Condenser House "G":

C. I. Salt Water Condensers—2. 7 sections 1400—2" Tubes 12'1" long: Retube		29,494.32	
Pipe Repairs, Large Piping: Replace 3 pipe gaskets & Repair 2 R. S. Joints		24.80	
			29,519.12

Engine & Blower Room "C-1":

9" x 3" x 10" Foster Steam Pumps—2. Serial Nos. 41003 & 41278:

New gasket between cover and cylinder 241278	3.42	
New steel piston rod (241003)	27.32	
Replace 2 glands (241003)	3.14	
Overhaul	5.84	
		39.92

[64,225] 16" x 16" x 18" Davidson Steam Pump (single). Steam valve & seat:

Replace 4 pins & 4 bushings	825.52	
Overhaul	46.72	
		872.24

8" x 2" x 10" Foster Steam Pump. Serial Nos. 41474 & 41475:

Replace 4 pins & 4 bushings 241474	23.52	
Replace 2 cross-shafts 241474	15.68	
Replace 1 cross-shaft 241475	7.84	
Replace 4 pins	9.84	
Replace 4 bushings 241475	15.68	
Replace gasket on steam end 241475	3.52	
Replace 4 nuts on foundation	1.10	
		79.18

Pipe Covering: 4'0" of Std. Magnesia Pipe Covering with Canvas	2.60	
Pipe Repairs, Small Piping: Replace 32'0" of Pipe	45.02	
		8218.86

Exhauster Room "L":

20 cu. ft. Connersville Exhauster direct connected to 20" x 20" Buckeye Horizontal Steam Engine, Serial Nos. 4965 & 5272:

Adjust main valve connecting rod lockes and overhaul cut-off valve adjustment 24965	11.68	
Replace Rocker Arm Shaft for cut-off valve 25272	13.68	
		25.36

Pipe Repairs:

Small Piping: Rework 2 valves; replace 4'0" of pipe and remake 3 bolt joints	4.42	
Large Piping: Replace 7 pipe gaskets and remake 70 bolt joints on pipe	38.48	
		42.90
		68.26

Consolidated Gas Company—11th Street Station—Continued

[Ord. 32782] Generator House "A":

12'0" dia. Lowe Type Water Gas Sets—4 including Generators, Carburetters, Superheaters, Linings, Wash Boxes and Seal Pots Works Nos. 1, 2, 3, & 4:

Works Nos. 1:

Replace Tee on Superheater ...	$227.20		
Weld joint on Wash Box (2 ft.)	12.00		
Replace 10" grate I Beam 11'0" long—2	108.00		
Works No. 2:			
Repair crack on Generator with steel ring 30" O. D. x 30" I. D. x ¼" thick riveted to shell ..	62.04		
Replace 3 Lowes for charging throats	67.41		
Replace 1—30" valve	360.32		
Weld 1—30" x 30" x 20" Tee ...	3.60		
Works No. 3:			
Caulk seam on superheater 4 ft.	7.00		
Works No. 4:			
Replace 30" gasket and caulk 12 rivets in wash box	30.10		
Works Nos. 1, 2, 3, & 4: Paint 4 sets	137.12		
		$1,283.74	
Pipe Covering: 20'0" of 30d. Magnesia Pipe Covering with Canvas		48.05	
Pipe Repairs:			
Small Piping: Repack 3—valves & Replace 1 Pipe Gasket	61.82		
Large Piping: Repack 2 Valves, Replace 1 Pipe Gasket, Caulk seam, Caulk 11 Rivets ..	11.44		
		813.26	
			$1,345.05

Generator House "A-1":

12'0" dia. Lowe Type Water Gas Sets—8 including Generator, Carburetors, Superheaters, Wash Boxes, Seal Pots, Linings, etc., Works Nos. 5, 6, 7, 8, 9, 10, 11, & 12:

Works No. 8:

Replace generator shell using old castings	$6,650.00	
Replace 1—30" Valve	360.77	
[Ord. 32551] Works No. 7: Replace 1 30" Valve	360.77	
Works No. 6: Replace gasket in generator cleanout door 29" x 26"	3.50	

Consolidated Gas Company—11th Street Station—Continued

Works No. 10:			
Replace 1—36" Valve	569.77		
New Gasket and Caulk 12 rivets on Wash Box	30.10		
Works No. 12: Caulk leak on superheater	7.10		
Works Nos. 7 & 11: New Generator shells & Lining (Hopper Bottoms)	13,300.00		
		$21,700.07	
Coal Buggies—38. New bottoms on 12 buggies		98.40	$21,798.47
Machine Shop "L":			
7½" x 6" Air Compressor Made by Chicago Pneumatic Tool Co., Serial No. 7640: Overhaul		$17.52	
Pipe Repairs, Small Piping: Repack 3 valves and replace 1 Valve		3.66	$21.18
Machine Shop "M":			
8" x 12" Horizontal Porter Steam Engine:			
Overhaul eccentric strap & valve slide		85.84	
Replace cylinder cover		2.85	
Replace asbestos lagging on cylinder		7.06	
Replace portion of belt 36 ft. long (Canvas)		30.96	$46.71
[fol. 3754] Oil Pump House "E"-2:			
10" x 6" x 12" Davidson Pump—2. Serial Nos. 8802 & 8724:			
Replace pins #8802 & 8724	87.38		
Replace gasket on valve cover #8802	4.66		
Adjust valve gear & repack #8724	7.73		
Replace piston, piston rod and plunger and overhaul	85.04		
		$104.81	
Pipe Covering: 2' 0" of Std. Magnesia Pipe Covering with Canvas		1.22	106.03
Pump House—E. of Q-I:			
5½" x 3¼" x 8" Foster Pump—1. Serial No. 40315: Replace piston rod			19.68
Pump Room—C-I:			
9" x 5" x 12" Foster Pump—1. Serial No. 41271:			
Replace piston rod	27.52		
Overhaul	135.36		
		162.88	
Pipe Covering: 2' 0" of Std. Magnesia Pipe Covering with Canvas		1.60	
Pipe Repairs, Small Piping: Repack 2 valves		.64	165.12

Consolidated Gas Company—11th Street Station—Continued

Pump Room V:

6" x 6" x 10" Davidson Pumps—2. Serial Nos. 17190 & 17189:			
Replace 4 pins	9.84		
Replace gasket between valve chest & cylinder & Overhaul #17190	13.35		
Overhaul & tighten on foundation #17189	11.68		
		35.06	
12" x 14" x 14" Davidson Pumps—2. Serial Nos. 17145 & 17144: Replace 4 pins		9.84	
Pipe Covering: 5' 0" of Std. Magnesia Pipe Covering with Canvas		3.51	
			48.41

[fol. 3755] Purifier House "O":

6" x 4" x 6" Worthington Pump—1. Serial No. 164974: Replace cross-shaft		$7.84	
Purifiers, 40' 0" x 40' 0" x 8' 0" deep—4. Wet Seal:			
Replace 3 gaskets on clean out doors	$5.97		
Caulk leak in cover	1.75		
		7.72	
Pipe Repairs, Small Piping: Replace 1—valve gasket		.92	
			$16.48

Purifier House "P":

Bucket elevator in steel casing, 24" x 48", lift 85' 0". Conveyors and elevator driven by Vertical Engine 8" x 7" American Blower Co.:			
Rebabbit Crank Pin Boxes—2	$35.36		
Overhaul	35.04		
		70.40	
Paint		8.64	
Steel Oxide Buggies—9. Repair side of 1 Buggie		5.55	
7' 6" x 2' 6" x 2' 6" Wood Oxide Trucks—6. Reline bottom of 1 car		5.42	
Traveling Crane operated by 7½ H. P. Dake Engine Capacity 20 tons: Paint and scrape guide rails		16.38	
Pipe Covering: 3' 0" of Std. Magnesia Pipe Covering with Canvas		2.55	
Pipe Repairs, Large Piping: Repair 1 B. S. Joint		8.91	
			$117.85

Shaving Scrubber House "H":

10' 0" dia. x 29' 10" high shaving scrubbers—4. Remake joints on 8 bolts		2.78	
Pipe Covering: 3' 0" of Std. Magnesia Pipe Covering with Canvas		2.19	
			4.97

[fol. 3756] Shaving Scrubber Room "M":

35" Sturtevant Planing Mill Exhauster belted to 7" x 7" Sturtevant Vertical Engine: Replace portion of pipe		$16.50	
Pipe Covering: 15' 0" of Std. Magnesia Pipe Covering with Canvas		10.95	
Pipe Repairs, Large Piping: Replace 3 pipe gaskets & repair 1 B. S. Joint		13.20	
			$40.65

Consolidated Gas Company—11th Street Station—Continued

Store Room "M":

9" x 10" x 12" Davidson Pump: General Overhauling. New Rod. New Piston. New Valves 106.72

Office Building "L":

Double Beam two columns wagon scale, capacity 25 tons 9' 0" x 20' 0": Replank platform 59.40

Water & Tar Pump House "E":

5½" x 4" x 8" Davidson Steam Pump—2. Serial Nos. 8817 & 8818:

Repack	7.10	
Replace Bronze Piston Rods—2	39.36	
Replace 4 pins	9.84	
Replace valve cover gaskets—2	1.82	
		58.12

3¾" x 4⅝" x 7" Blake Steam Pump—1.

Replace piston rod	16.68	
Overhaul valve motion	5.84	
		22.52

14" x 12" x 14" Davidson Steam Pump, single. Serial No. 9844: Overhaul 23.36

Pipe Covering: 3' 0" of Std. Magnesia Pipe Covering with Canvas 1.77

Pipe Repairs, Small Piping: Repack 1 valve and replace 1 union ..... .82

106.59

[fol. 3737] Yard:

4' 0" x 12' 0" x 4' 0" Steel Tank new top..... $89.55

60' 0" dia. x 30' 0" high Gal. Oil Storage Tank (No. 1):

Caulk 20 ft. of Seam	$7.00	
Point up 250 sq. ft. brickwork	37.50	
Paint	101.74	
Repair Foundations	500.00	
		646.24

52' 0" dia. x 15' 6" high Tar Storage Tank—2. Nos. 2 and 3:

New Crown on both tanks	3,165.96	
New Gasket (8") No. 2	1.05	
Paint Nos. 2 and 3	60.74	
Caulk 6 ft. of vertical seam #2.....	.88	
Relay 25 bricks #2	1.44	
		$3,250.07

40' 0" dia. x 20' 0" high Tar Oil Storage Tank #4:

Paint	45.22	
Replace 8 wood stair treads	2.46	
		47.68

Consolidated Gas Company—11th Street Station—Continued

4' 0" x 13' 0" x 4' 0" Steel Tank: New Top		$39.75	
60' 0" dia. x 30' 0" high Gas Oil Storage 40' 0" dia. x 27' 0" high Tar Oil Storage Tank 25:			
New Crown	1,024.90		
Caulk 10 ft. of seam	3.50		
Paint	40.69		
		1,069.09	
12' 0" dia. x 41' 6" high, Steel Hot Scrubbers Nos. 5, 6, 7 & 8 Caulk 24 Rivets & 10 ft. of seam		10.50	
Seal Pots 3' 0" dia. x 4' 0" deep—2: Replace at $121.00 each		242.00	
15' 0" x 7' 0" x 5' 6" deep Steel Tank—1:			
New Top with tar paper	20.93		
Paint	2.90		
		23.83	
[fol. 3758] 75' 0" x 22' 6" x 8' 6" deep Tar Separating Tank (V): Paint		$20.24	
61' 10" x 10' 6" x 9' 5" Steel Tar Separating Tank:			
Paint		7.45	
43' 0" x 10' 0" x 10' 0" deep Tar Separating Tank (F): Paint		5.16	
Pipe Covering: 48' 0" of Std. Magnesia Pipe Covering with Canvas		36.60	
Pipe Repairs, Small Piping: Repack 10 valves, Replace 2 pipe gaskets, Replace 2 tees, Replace 2 valves, Replace 5 pet cocks, Replace 1 Union, Replace 1 plug, replace 10' 4" of pipe.....		41.11	
			$5,519.72
[fol. 3759] Holders:			
500,000 cu. ft. Relief Holder 3 Lift, Steel Tank 98' 0" dia. x 27' 0" known as 27 Caulk tank, crown, shells and paint holder.....		$1,143.00	
4 Lift, Storage Holder in Steel Tank 195' 0" dia. x 40' 0" deep Capacity 4,230,000 cu. ft. known as Holder 28 New pipe railing on crown, grips, tank coping and stairs and paint holder.....		8,602.00	
5 Lift, Storage Holder in Steel Tank 195' 0" deep, Capacity 5,000,000 cu. ft. Known as Holder 29 Remove stiffeners, repair guide Rollers, Caulk Leaks, New Guard and paint holder.....		22,659.00	
5 Lift, Storage Holder in Steel Tank: 195' 0" dia. x 39' 3" deep. Capacity 5,000,000 cu. ft. Known as Holder 210 Remove Stiffeners. Repair Guide Rollers, Caulk Leaks, New Guard Rail and paint holder		22,659.00	
			$55,363.00
Miscellaneous: General Inspection of Running Machinery, Gauges, etc.			3,000.00
Total			$187,367.16

[fol. 3760] Consolidated Gas Company—21st Street Station

Riggers Storage (G):

Cameron Simplex Steam Pump—One. Size—10" x 5" x 13": Overhaul		$11.68
Generators (Hg.):		
Davidson Drip Pumps—Two. Size 6" x 6" x 10":		
Serial Nos. 79611, 79612, 4 new capscrew pins	$9.84	
Hydraulic Coal Elevators "A"—Two with 10½" dia. x 21' 0" plunger: Replace 7 wire screens Size 38" x 65" x ⅛" wire (2" diamond mesh)	60.14	
Pipe Covering: 105' 0"—1 Layer Hair Felt pipe covering 220' 0" Std. Magnesia Pipe Covering, with Canvas	261.04	
Pipe Repairs, Small Piping: Repack 18 Valves, Replace 4 fittings, Replace 1 nipple, Replace 3 flanges, Replace 4' 9" of pipe, Replace 2 Valves	50.03	
		$381.05

[fol. 3761] Operating Floor (Hg.):

Lowe Type Water Gas Sets—5 including 12' 0" Generator; 13' 0" Carburetter, 13' 0" Superheater, Washer, Linings, Seal Pot, Gauge Board, Gauges, etc., Works Nos. 1, 2, 3, 4, 5:

Works No. 1:

Carburetter:

Weld on new bottom plate 10' 6" x 4' 10" x ½" thick, 1 New second plate 10' 6" x 5' 8" x ⅜"	$197.60

Superheater:

Weld on new bottom rim 13' 0" dia. x 5' 0" x ½"; Weld on new second rim 13' 0" dia. x 5' 8" x ⅜"	782.70
2 Plates on Purge Cone 3' 5" x 4' 0" x ⅛"	14.80
Replace 1-36" x 24" C. I. Tee (Flanged)	347.16
Replace 3' 10" of 24" C. I. Flanged Pipe	93.17

Works No. 2:

Carburetter:

[fol. 3762] Weld on new bottom plate 10' 6" x 4' 10" x ½"	106.50

Works No. 3:

Generator:

New Shell	4,280.00	
Reline Generator	4,600.00	
Replace 1-10" 25# I Beam, 12' 0" long	33.03	
Replace 1 C. I. Plate 6" x ¾" x 12' 0" long	15.21	
		8,928.24

Consolidated Gas Company—21st Street Station

Carburetter:

Weld on new plate on 2nd rim 10' 6" x 5' 8" x ⅝"	91.10	

Superheater:

Weld on new bottom rim 13' 0" dia. x 5' 0" x ½"	428.60	
Replace 1-36" x 20" Tee	313.58	

Works No. 4:

Carburetter:

New bottom plate 10' 6" x 4' 10" x ½"	106.50	

Superheater:

Weld on new bottom rim 13' 0" dia. x 5' 0" x ½"	428.60	
Replace C. I. flanged pipe 24" x 3' 10" long	93.17	
Electric weld 4 cleanout door handles 1" dia. x 6" long	12.00	

Works No. 5:

Weld 1 crack in superheater	3.00	
Electric weld 1 cleanout door handle 1" dia. x 6" long	3.00	
1-36" x 24" C. I. Flanged Purge Tee	347.16	
		12,206.88

[fol. 3763] Lowe Type Water Gas Sets—8 including 12' 0" Generator, 11' 0" Carburetter, 11' 0" Superheater, Washer, Linings, Seal Pot, Gauge Board, Gauges, etc., Works Nos. 6, 7, 8, 9, 10, 11, 12, 13:

Works No. 6:

Weld on new plate on Generator on bottom rim. Size 34" x 5' 0" x ½"	$29.72
1 New 36" x 24" purge tee	347.16
Caulk 1-24" joint on top of wash box	3.50

Works No. 7:

1 New 36" x 24" Flanged Purge Tee	347.16
1 New 36" x 20" flanged Tee	313.58

Works No. 8:

Carburetter:

Weld 2 cracks in door frames	6.00
Replace 1-36" x 24" purge Tee	347.16
Replace 3' 10" of 24" flanged pipe	93.17
Replace 1-36" x 20" flanged Tee	313.58
Replace 5 C. I. cleanout door frames 29" x 20" x 18"	206.55

Consolidated Gas Company—21st Street Station—Continued

Works No. 9:			
Replace 36" x 24" purge Tee....	347.16		
Replace 3' 10" of 24" flanged pipe	93.17		
Works No. 10:			
Replace 1–36" x 20" flanged Tee	313.58		
Weld crack in superheater door frame	3.00		
Caulk 1' 0" of seam in base of superheater	1.75		
Works No. 11:			
Replace 1–36" x 20" flanged Tee.	313.58		
Works No. 12:			
Reline Generator.....	4,425.00		
Replace 9 door frames 20" x 20" x 18".....	371.79		
Replace 2 generator grate bar supports 10" I Beam 25 lb. 12' long	66.06		
Replace 2 Generator C. I. top plates for above 6" x ¾" x 12' 0" long.....	30.33		
Weld 3 cleanout door handles 1" dia. 6" long.....	9.00		
Recaulk 3 ft. of seam on superheater	3.50		
Replace 1–36" x 20" flanged Tee.	313.58		
[fol. 3764] Works No. 13:			
Recaulk 2' 0" of seam on superheater	3.63		
Replace 36" x 20" Flanged Tee..	313.58		
Replace 1–24" x 30" cleanout door gasket on superheater...	3.56		
Works Nos. 7, 8, & 10: New Shells including linings.....	20,000.00		
Works Nos. 9 & 11: New Shells not including linings.....	8,380.00		$36,998.85
Dust collectors—13 6'-10" x 6' 10" x 16' 0": Replace 13.....			13,702.00
Pipe Covering: 25' 0" of Std. Magnesia Pipe Covering with Canvas			15.25
Pipe Repairs:			
Small Piping: Repack 3 Valves Replace 1 pipe Gasket Replace 1 Valve bonnet Gasket	4.05		
Large Piping: Replace 3 Gaskets Replace 1 C. I. door for Valve Replace 1 flanged Tee Replace 16' 6" of Pipe Replace 19' 4" of R. S. Pipe	299.17	303.22	$63,316.20

Consolidated Gas Company—21st Street Station—Continued

[fol. 3765] Exhauster, Engine & Blower Room (H 4):			
Knowles Compound Duplex Steam Pump 9" x 14" x 7" x 18" Replace 2 pins & 2 bushings		$12.76	
Buckeye Horizontal Steam Engine—2 16½" x 24" direct connected to Connersville Exhauster, 118 cu. ft. per rev.:			
Engine (Serial No. 5038): Overhaul main shaft bearings and Main Rocker Arm Bearing	$23.36		
Exhausters Nos. 1 and 2: Repairs	6,000.00		
		$6,023.36	
Worthington Duplex Steam Pumps—2 10" x 6" x 10". Serial Nos. 35999, 60934:			
No. 35999: Replace 2 pins & 2 bushings:	$12.76		
No. 60934:			
Replace 4 pins	9.84		
Overhaul	23.36		
		$45.96	
Worthington Duplex Steam Pump 6" x 4" x 6":			
Serial No. 17006 Replace 4 pins & 2 links		$24.60	
Earle Simplex Steam Pump: 3½" x 2" x 4": Replace		132.93	
Pipe Covering: 36' 0" Std. Magnesia Pipe Covering, with Canvas		23.24	
Pipe Repairs:			
Small Piping: Repack 3 Valves, Replace 1 Gasket	$2.24		
Large Piping: Repair 1 B. S. Joint	6.75		
		8.99	
			$6,271.84
[fol. 3766] Machine Shop & Store Room (H-2):			
Greenfield Vertical Steam Engine—1 11" x 12". Works No. 13: Overhaul main shaft bearings and Crosshead		$23.36	
Worthington Duplex Steam Pump, 7½" x 5¼" x 6":			
Replace 4 pins	$9.84		
Overhaul	23.36		
		33.20	
Pipe Covering: 5' 0" of Std. Magnesia Pipe Covering, with Canvas		3.89	
Pipe Repairs: Small Piping: Replace 1 Fitting		3.05	
			$63.50

Consolidated Gas Company—21st Street Station—Continued

Boiler Room (B-3):

Battery of 2 B. & W. Boilers, Known as Boilers Nos. 1 and 3, each consisting of 240—4" x 18' 0" tubes, Works 1 & 3:

Works No. 1:

4 front plates 36" x 49" x ½" C. I.	$82.56	
Weld 2 C. I. Door frames	6.00	
3 Plates 10½" x 49" x ½" C. I.	18.06	
3 Door hinges 15" x 24" x ⅜"	9.48	
1 new side door frame 22" x 21" x ¼" C. I.	8.12	
1 row firebrick 9' 0" x 2' 0" x 4" thick	20.97	
Point up brickwork	30.80	
Brick in top of 2 drums	70.03	
Repack 2—2½" blow-off valves	.64	
Regrind 2 safety valves	2.92	

Works No. 3:

Weld 4 cracked door frames	12.00	
Weld 3 front plates	9.00	
Point up brickwork	30.50	
Regrind 1 safety valve	1.46	
Repair 2 side walls 8' 0" x 9' 0" x 11' 0"	86.94	
New Firewall 14' 0" x 6' 0" x 2' 0"	591.93	
Repair front wall, 14' 0" x 8' 0" x 1' 0"	135.24	
Repair front of boiler 14' 0" x 4' 0" x 1' 0"	80.67	
		$1,197.12

R. S. Stacks, 7' 0" dia. x 110' 0"—2 for Boilers 1, 3, 24 & 25: Paint 106.29

[fol. 3767] Foundation for above stacks: Point up brickwork 40.00

Battery of 2 B. & W. Boilers, Known as Boilers No. 2 and 4 each consisting of 288—4" x 18' 0" Tubes:

Works No. 2:

Regrind 4 blow-off valves	$5.84	
Point up brickwork	21.00	

Works No. 4:

Regrind 4 blow-off valves	5.84	
Point up brickwork	21.00	
		53.69

Consolidated Gas Company—21st Street Station—Continued

Battery of 2 Aultman & Taylor Boilers, Known as Boilers No. 24 and 25, each consisting of 235—4" x 18' 0" Tubes:		
Works No. 24:		
Replace 5 C. I. plates—3—47" x 60" x ½", 1—14" x 60" x ½", 1—10" x 60" x ½"	115.83	
Replace 1 Ash Door 16" x 20" x ⅝" x 3"	4.08	
Replace 1 door lining, 25" x 16" x ⅝"	3.51	
Regrind & overhaul 1 safety valve	2.92	
Point up brickwork with high tempite	26.90	
Works No. 25:		
Replace 6 C. I. plates: 3—47" x 60" x ½", 2—14" x 60" x ½", 1—10" x 60" x ½"	125.64	
Weld 2 cracked door frames	6.00	
Replace 1 door lining 25" x 16" x ⅝"	3.51	
Replace 2 Soot blower pipes, 1 double 2" x 3" x 11' 0", 1 single 2" x 11' 0"	11.83	
Point of brickwork with high tempite	26.90	
Regrind 3—2½" blow off valves	2.92	330.64
[fol. 3768] Battery of 2 B. & W. Boilers, known as Boilers Nos. 26 and 27, each consisting of 288—4" x 18' 0" Tubes:		
Works No. 26: Repair leak on end of 1 drum	5.25	
Works No. 27: Remake joint between top of drum and 4" blow-off valve	1.39	$6.64
42" x 66" x 24" Boiler Charging Coal Car: 1 New steel strip 2½" x ½" x 20" long		1.13
No. 3 Diamond Soot Blower—1 (On Boiler No. 27): Replace 1 Soot Blower Unit	142.00	
American Blower Engine 9" x 8" Type A direct connected to No. 140 B American Blower—2:		
Engine No. 12522: Overhaul Eccentric, Main Bearings & Eccentric Rod Boxes	23.36	
Engine No. 12523:		
Rebabbitt Eccentric Strap 17.68		
Overhaul 23.36	41.04	
Blower—1:		
8—¾" rivets in base of blower 1.85		
3—6" of ¾" pipe .91	2.76	
		67.16
14" x 12" x 20" Cameron Simplex Steam Pumps—2: Overhaul each pump		46.72
[fol. 3769] Pipe Covering: 358' 0" Std. Magnesia Pipe Covering with Canvas	315.24	
Pipe Repairs: Small Piping: Repack 21 Valves, Renew 1' 0" of pipe, Replace 4 fittings, Replace 8 Gaskets, Repair 1 pin hole in valve, Remake Joints on 2 by-pass valves	32.07	2,339.02

Consolidated Gas Company—21st Street Station—Continued

Condensers (H c):

Salt Water Condenser, 43' 0" x 8' 4" x 16' 9" with 2,000—3" dia. Tubes 12' 0" long—2:

No. 1:

1 C. I. partition plate 24" x 100" x ⅜"	$21.06	
Retube	20,928.00	
No. 2:		
2 C. I. partition plates 24" x 100" x ⅜"	42.12	
Retube	20,928.00	
		$41,919.18
Knowles Duplex Steam Pump, 5¼" x 4¾" x 5":		
Replace		143.24
Steel Tar Separating Tank 15' 0" x 58' 0" x 8' 6" deep—4 compartments (Underground): Repairs		500.00
Salt Water Condenser, 44' 2" x 8' 6" x 15' 0" with 1986—3" dia. Tubes 12' 0" long: Replace		35,250.00
[fol. 3770] Pipe Covering: 57' 0" 8td. Magnesia Pipe Covering, with Canvas		40.19
Pipe Repairs:		
Small Piping: Repack 7 Valves, Replace 2 Valves, Replace 2 pipe gaskets and Replace 3 fittings	$16.91	
Large Piping: Repair 4 E. S. Joints.	27.00	
		43.91
		77,906.52

Shops & Pumps (H s):

Pipe Covering: 50' 0" 8td. Magnesia Pipe Covering with Canvas		52.00
Pipe Repairs, Small Piping: Repack 4 Valves		2.64
		54.64

Salt Water Pump House (H s):

18" x 20" x 24" Davidson Steam Pumps—2 Serial Nos. 19883 and 19241:

For 2 Pumps:

Repack	$16.72	
Replace 2 pins & 2 bushings	12.76	
		29.48
Cameron Simplex Steam Pump, 18" x 10" x 20"—1: Overhaul		23.36
Pipe Covering: 20' 0" 8td. Magnesia Pipe Covering, with Canvas		13.40
Pipe Repairs, Small Piping: Repack 3 Valves, Replace 1 fitting		7.72
		73.96

[fol. 3771] Pump House "N":

Washington Duplex Steam Pump—One Size—6" x 8½" x 6":

Replace 2 keys	$3.92	
Overhaul	17.52	
		$21.44

Consolidated Gas Company—21st Street Station—Continued

Cameron Simplex Steam Pump—Two Size 6" x 3" x 7": Repack both pumps			15.46
Foster Duplex Steam Pump—Two Size 9" x 6" x 12". Serial Nos. 42839 & 41892:			
Replace 2 pins and 2 bushings	$12.76		
Overhaul	5.84		
		18.60	
Pipe Repairs, Small Piping: Repack 1 valve	.32	.32	55.82
Round House:			
Cameron Simplex Steam Pump—One Size 10" x 5" x 13" Serial No. 2567:			
Repack piston rod gland and valve lever gland.		$3.87	
Worthington Duplex Steam Pump—One Size 7½" x 6" x 10":			
Overhaul valve rigging complete		23.36	
			$27.23
Yard Tanks:			
Steel Settling Tank:			
Size 20' 0" x 8' 0" x 10' 0" deep: Replace		1,294.34	
[fol. 3772] Repair Salt Water Suction Line		2,500.00	
Pipe Repairs, Small Piping:			
Repack 1 Valve Replace 1 tee		7.19	
			3,801.53
Coal House (V) #1:			
Belt Conveyor #3—20" x 150' 0" long, including tripper with chute:			
Replace 50' 0" of 4 ply rubberized canvas belt.		192.00	
Belt Conveyor #4—20" x 150' 0" long, including tripper with chute:			
Replace 50' 0" of 4 ply rubberized canvas belt.		192.00	
Pipe Covering:			
15' 0" Std. Magnesia Pipe Covering with canvas		12.00	
			396.00
D-C Coal Hoist:			
10" x 12" Lidgerwood double cylinder, double side by side friction drum:			
New Liners under crosshead shoes—2.	$6.38		
Repack piston rod and valve stems	7.73		
		14.11	

Consolidated Gas Company—East 21st Street Rubber Station—Continued

Union Wagon Loader with Motor—One: Overhaul	23.23	
Steel Receiving Hopper, 10' 0" x 10' 0" x 4' 6" inc., chuting steel lined chute to Conveyor 21: Replace	648.00	
Pipe Covering: 6" 0"—2" Std. Magnesia pipe covering with canvas	4.38	
[fol. 3773] Pipe Repairs, Small Piping: Remove 3 valves Replace 1 valve Replace 1 gasket	12.69	
		702.34
Storage Shed (V)—2:		
8½" x 10" Link-reversed Double Cylinder, double drum hoisting Engine—One: Overhaul 2 crank pin boxes, 2 main shaft bearings, 4 drum bearings, 4 eccentric straps, reversing gear	29.20	
New liners under crosshead shoes	6.38	
		35.58
Storage Shed (V)—3:		
36" gauge industrial track, without cross ties—244 linear feet: Replace 11—15' 0" lengths of 20 lb. rail	66.00	
Turntable—Two: Replace	410.00	
		476.00
Storage Shed (V)—4:		
Barber Green Electric Coal Loader equipped with 15 H. P. Westinghouse Motor—One: Overhaul	35.04	
Hydraulic Coal Elevator 8" x 8" platform, including ram, guide, frame, casing and guards: Overhaul	21.36	
[fol. 3774] 36" gauge industrial track, without crossties, 192 linear ft.: Replace 2—15' 0" lengths of 20 lb. rail	12.00	
Turntable—One: Replace	205.00	
		273.40
Storage Shed (V)—5:		
36" gauge industrial Track, main track, without ties, 31' 0" linear feet: Replace 2—15' 0" lengths of 20 lb. rail	18.00	
Turntable—One: Replace	205.00	
		227.03
Storage Shed (V)—6:		
Hydraulic Coal Elevator 8' 0" x 8' 0" platform, including Ram, guide frame, casings and guards: Replace	$1,791.34	
36" gauge industrial track, without ties—15 linear feet: Replace 1—15' 0" length 20 lb. rail	6.00	
Hydraulic Accumulator 12" dia. plunger x 7' 0" stroke: Overhaul	21.36	
[fol. 3775] Ideal Porter Vertical Steam Engines, 7" x 7" added to No. 7 Sturtevant Monogram Rectifying Blowers, including belting and guards—Two:		
For both engines: ReBabbitt bearings—4—3" x 5"	870.72	
Overhaul	23.36	
		94.08

Consolidated Gas Company—21st Street Station—Continued

American Blower Co., Vertical Steam Engine 9" x x 7" belted to Sturtevant Shavings Blower, No. 45, including transmission: Overhaul engine.....	23.36	
Pipe Covering: 2' 0" Std. Magnesia Pipe Covering, with Canvas	1.72	
Pipe Repairs, Small Piping: Repack 3 valves.....	.96	
		4,740.82
[6d.3776] Purifying House 22 U:		
Pipe Covering: 76' 0" Std. Magnesia Pipe Covering, with Canvas	847.32	
Pipe Repairs, Small Piping: Repack 2 Valves.....	.64	
		47.96
Purifiers & Scrubbers T:		
Pipe Covering: 23' 0" Hairfelt Pipe Covering.....	11.00	
Pipe Repairs, Small Piping: Replace 1 Valve, Replace 1 fitting	7.10	
		18.10
Purifying House 21 R:		
Pipe Covering: 10' 0" Hairfelt Pipe Covering 40' 0" Std. Magnesia Pipe Covering, with Canvas.....	37.40	
Pipe Repairs, Small Piping:		
Repack 2 Valves, Replace 2 fittings, Regrind 1 Valve, Repack 1 gland in Expansion joint $15.72		
Large Piping: Repair 1 S. S. Joint.... 8.91		
	24.63	
		62.03
Meter House "O":		
18' 6" dia. Station Meter, 18' 9" long, 4 partition Drum, Meter No. 5: New Hinman Drum.....		12,500.00
[6d.3777] Exhauster and Engine House (W):		
85.7 Cu. Ft. Connersville Double Drive Exhauster, direct connected to Two 16" x 16" Ball Vertical Simple Steam Engines: Engine Nos. 6295 and 6294 Overhaul Eccentric Straps.....	$23.36	
62 Cu. Ft. per revolution Roots Exhauster direct connected to 17" x 16" N. Y. Safety Vertical Engine: Replace N. Y. Safety Engine.....	3,800.00	
65 Cu. Ft. Connersville Exhauster, direct connected to 14½" x 21" Buckeye Vertical Engine, Engine No. 6496: Adjust main bearing.....	11.68	
Pipe Covering: 21' 6" Std. Magnesia Pipe Covering	33.86	
Pipe Repairs, Small Piping: Repack 11 Valves, Replace 4 Gaskets, Replace 5 fittings, Replace 1 Valve, Replace 1 steam trap gasket, Replace 1 Valve bonnett gasket.....	50.00	
		$3,918.90
[6d.3778] Relief Holders:		
2 lift Relief Holders in combination tank, 82" 0" dia. x 38' 0" high capacity 350,000 cu. ft. including tank and cup heating arrangement. Known as Relief Holders Nos. 1 and 2, Both Tanks: Caulk and paint.....		$1,298.00

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Consolidated Gas Company—21st Street Station—Continued

Commercial Holders:

3 lift Storage Holders in brick tanks 90′ 0″ dia. x 27′ 0″ high Capacity 400,000 cu. ft. known as Holders Nos. 3, 4, 5 and 6:			
Point up 200 sq. ft. of brickwork.....	$30.00		
Remove bars from guide, paint guides, caulk leaks, clean cup and grip, repair rollers and paint.....	8,480.00		
		8,510.00	
2 lift Storage Holders in Brick Tanks, 171′ 0″ dia. x 37′ 3″ high, Capacity 1,500,000 cu. ft. including tank and cup heating arrangement, known as Holder No. 7: New cup and grip, new guide rollers, crown and grip guard railings, repair top girders and paint.....		11,277.00	19,797.00
Miscellaneous:			
General Inspection of Running Machinery, Gauges, etc.....			3,000.00
Total			$201,623.32

[fol. 3779] Consolidated Gas Company—90th Street Station

Boiler Room "A-1":

Aultman & Taylor Boilers—2, Solid Fuel—108—4″ tubes 16′ 0″ long:			
Point up brickwork, Works 8 and 9..	$20.00		
Paint front of boilers, ⁄ 8 and 9....	5.76		
Regrind 3″ safety valve, ⁄8.....	2.92		
Replace Fire Door Lining, ⁄9.....	3.02		
		$31.70	
Aultman & Taylor Boilers—2 108—4″ tubes 16′ 0″ long, Works Nos. 10 and 11:			
Point up Brickwork, Nos 10 & 11...	$14.00		
Paint front of Boilers, Nos. 10 & 11..	5.76		
Regrind safety valves, Nos. 10 & 11	5.84		
		25.60	
Guild & Garrison Simplex Steam Pump, 8″ x 4½″ x 8″:			
Replace 1 pin	$2.46		
Overhaul including new valves and seats	55.04		
		57.50	
Blake Simplex Steam Pump, 8″ x 8″ x 12″: Overhaul, including new valve seats & valve link pins			35.04
Cameron Simplex Steam Pump 5″ x 2½″ x 6″:			
Overhaul and repack			18.78
Sturtevant Vertical Steam Engine 6″ x 5″ direct connected to Sturtevant Forced Draft Blower, 14,000 cu. ft. per min.: Rebabbitt.....			17.68
Steel Stack, 5′ 0″ dia x 74′ 0″ high: Replace Lower 25′ 0″—¼″ thick			673.56
[fol. 3780] Pipe Covering: 231 ft. of Std. Magnesia Pipe Covering, with canvas			195.74

Consolidated Gas Company—99th Street Station—Continued

Pipe Repairs:

Small Piping: Repack 13 Valves, Replace 5 gaskets, Replace 4' 3" of pipe, Replace 7 fittings	$27.68		
Large Piping: Repack 1 Valve, Replace 1 Gasket and Replace 3 fittings	3.46		
		$31.14	
			$1,086.74

Condenser & Scrubbers "K":

Greenfield Vertical Engine 3⅜" x 5"; belt connected to MacKenzie Revivifying Blower 0.9 cu. ft. per revolution.

Works No. 7:

Overhaul and repack	$12.68		
Relag cylinder	1.16		
		$13.84	
Vertical Shaving Scrubbers—2 10' 0" dia x 24' 0" Works Nos. 3 and 4: Caulk seam around base of both		7.00	
Pipe Covering: 7' 0" Std. Magnesia Pipe Covering, with Canvas		4.27	

Pipe Repairs:

Small Piping: Repack 2 Valves, Replace 5 Gaskets	$6.18		
Large Piping: Repair 7 B. S. Joints, Replace 1 Gasket	35.80		
		41.98	
			67.09

[fol. 3781] Engine Room "A":

Greenfield Vertical Steam Engine, 12" x 12" direct connected to Roots #9 ½ Exhauster 43.8 cu. ft. per rev.—2

No. 31613:

Drill out stump and replace bolt	$3.07		
New Gasket	6.84		
Replace rope in Flexible Coupling	4.92		
No. 31612 & 31613: Overhaul	487.04		
		$501.87	
Davidson Simplex Steam Pump, 9" x 6" x 12", No. 13765: Replace 1 cap screw & 1 bolt		4.92	

Knowles Duplex Steam Pump, 6" x 4" x 6":

Replace 2 cross-shafts	15.68		
Replace 2 links	15.68		
Replace 4 pins	9.84		
		20	
Worthington Duplex Steam Pump, 10" x 6" x 10" No. 356209: Repack		7.73	
Sturtevant Horizontal Steam Engine 10" x 12", belt connected to Sturtevant #10 Design #2 Extra Heavy Blower, 15,000 cu. ft. per minute—2: Overhaul 2 Blowers & 1 Engine		70.08	

Consolidated Gas Company—59th Street Station—Continued

Armington-Sims Horizontal Steam Engine, 10½" x 12", belt connected to Sturtevant #10 Design #2 Extra Heavy Blower, 15,000 cu. ft. per min.:			
Overhaul Blower		11.68	
Pipe Covering: 107' 0" Std. Magnesia Pipe Covering with Canvas		91.89	
Pipe Repairs:			
Small Piping: Repack 1 Valve, Replace 6" pipe and Replace 1 fitting	9.81		
Large Piping: Repair 1 B. S. Joint	4.86		
		14.67	
			744.04
[fol. 3782] Exhauster "L":			
Pipe Covering: 21' 0" Std. Magnesia Pipe Covering with Canvas		15.33	
Pipe Repairs:			
Small Piping: Repack 2 Valves	$.64		
Large Piping: Replace 1 Gasket	2.78		
		3.42	
			18.75
Coal Handling Apparatus Dock "D-C":			
Brown Hoist Locomotive Crane #2 complete:			
Overhaul	$23.36		
Replace pinion gear	15.84		
Replace 6 C. I. Supporting Rollers	54.00		
Straighten main member and struts on boom	69.60		
		162.80	
Track Coal Hopper, 8' 0" x 10' 0" x 8' 0" Reline: 4 angles 4" x 4" x ¼" x 16' long; 4 pieces 13' 8" x 2' 6" x ⅛"; 4 pieces 5' 6" x 2' 2" x 3' 6" x 6' 3" x ⅛"; 2 pieces 9' 9" x 5' 9" x 8' 0" x 2' 0" x ⅛"; 2 pieces 7' 6" x 3' 6" x 8' 6" x 2' 0" x ⅛"		425.00	
			587.80
[fol. 3783] Generator House "A-2":			
10' 0" dia. Lowe Type Water Gas Set including Generator, Carburetter, Superheater, Wash Box, Linings, Seal Pot, etc., Works Nos. 1, 2, 3, & 4:			
Works No. 1:			
Reline Generator	$2,757.68		
Replace 30" x 30" x 20" Tee	231.30		
Works No. 2: Replace Hydraulic Piston Rod	13.85		
Works No. 3: Replace 2 Gaskets on cleanout doors	13.18		
Works No. 4:			
Replace 4 Gaskets on cleanout doors	26.36		
Weld crack in cleanout door	3.00		
Replace 2 Plates on purge stack	29.18		
		$3,074.55	

Consolidated Gas Company—99th Street Station—Continued

Dust Collector 8′ 0″ dia. x 17′ 0″ Replace —4.....	4.200.00	
Pipe Covering: 211′ of Std. Magnesia Pipe Covering with Canvas 70′ of 1 layer Hair Felt Pipe Covering with Canvas.....	264.68	
Pipe Repairs:		
Small Piping: Repack 4 Valves, Replace 2 Ells, Replace 1 Union, Replace 1 Cock.....	22.96	
Large Piping: Repair 20 Rivets, Weld Pinhole in Pipe.....	5.79	
		7,567.98
Purifiers "E": Pipe Covering: 100′ of Std. Magnesia Pipe Covering with Canvas.....	73.00	
Pipe Repairs: Small Piping: Repack 1 Valve and Replace 2 Couplings.....	2.01	
		75.01
[fol. 3784] Retort House:		
Pipe Covering: 27′ of Std. Magnesia Pipe Covering with Canvas.....	17.91	
		17.91
Scrubbers "A-4":		
Vertical Shaving Scrubber 8′ 6″ dia. x 22′ 0″—3 layers of Dumping grids: Replace 2 Gaskets.....	.....	1.94
Shop & Pump House "A-1":		
Rowland Vertical Steam Engine 8″ x 10″ Driving Main Shaft including Belt Guards: Overhaul and Repack	24.36	
Knowles Simplex Steam Pump 6″ x 17″ x 12″ (In (Reserve), Serial No. 100648:		
Replace Piston Rod..... $27.52		
Overahul 29.20		
	56.72	
Guild & Garrison Simplex Steam Pump 4½″ x 2½″ x 5″ (In Reserve) Works No. 26: Overhaul.....	23.36	
Cameron Simplex Steam Pump 6″ x 3″ x 7″ (In Reserve): Overhaul.....	23.36	
Knowles Duplex Steam Pump 4½″ x 2″ x 4″ (In Reserve) No. 68526: Overhaul.....	23.36	
Davidson Simplex Steam Pump 4½″ x 4″ x 6″ No. 8399: Replace 2 Pins.....	4.92	
[fol. 3785] Worthington Duplex Steam Pump 4½″ x 2¾″ x 4″ No. 159426 Works No. 21: Overhaul....	23.36	
Davidson Simplex Steam Pump 4½″ x 2½″ x 6″: Overhaul	23.36	
Cameron Simplex Steam Pump 5″ x 5″ x 7″ No. 11240: Overhaul & Repack.....	18.78	
Davidson Simplex Steam Pump 10″ x 12″ x 16″ Nos. 12813 & 12814:		
Replace 4 Pins..... $9.84		
Repack & Overhaul 2 Pumps..... 19.41		
	29.25	

Consolidated Gas Company—99th Street Station—Continued

Worthington Duplex Steam Pump 5¼" x 3½" x 5" No. 31574: Overhaul		23.36	
Pipe Covering: 42' of Std. Magnesia Pipe Covering with Canvas		29.99	
Pipe Repairs: Small Piping: Repack 2 Valves, Replace 2 Tees, Replace 2 Unions, Replace 2 Nipples		13.94	318.12
[fol. 3786] Tar Pump Pit:			
Davidson Simplex Steam Pump—One size—12" x 12" x 12":			
Replace 2 Pins	$4.92		
Overhaul	11.68	$16.60	
Davidson Simplex Steam Pump—One Size—8" x 4" x 10" Serial No. 2243:			
Replace 1 pin	2.46		
Overhaul	11.68	14.14	
Knowles Simplex Steam Pump—One Size 8" x 10" x 12":			
Replace 1 pin	2.46		
Replace valve chest, 8 valve seats, valves and springs and general overhaul	95.04	97.50	128.24
Accumulator House "A-1":			
Davidson Simplex Steam Pump—One Size—14" x 8" x 14":			
Replace 2 pins	4.92		
Replace gasket on water end	3.52		
Repack	8.36	16.80	
Cameron Simplex Steam Pump Size 14" x 9" x 18": Overhaul		35.04	
Pipe Covering: 5' 0" Std. Magnesia Pipe Covering with canvas		3.65	
Pipe Repairs, Small Piping: Repack 2 valves		.64	56.13
[fol. 3787] Yard:			
Steel Tar Storage Tank "Q" Size 21' 0" dia. x 21' 0" high: Caulk vertical seam		$1.75	
Underground Tar Separator "M" Size—54' 0" x 15' 0" x 6' 6" high: Replace steel cover		1,239.30	
Pipe Repairs:			
Repack 3 Valves	$8.96		
Replace 5 Fittings	9.20	10.16	1,251.21

Consolidated Gas Company—99th Street Station—Continued

Holders:

3 Lift Storage Holder in Brick Tank Size—102′ 0″ dia. x 28′ 7″ deep Capacity 600,000 cu. ft. Known as Holder Nos. 1 & 2:

No. 1:

New cup and grip sheets and new shell sheets back of friction plates. Repair guide rollers, paint Holder	21,716.00		
Point up brickwork	30.00		
No. 2: Repair and adjust guide rollers and paint Holder	1,216.00		
		$22,962.00	
1 Lift Relief Holder in Brick Tank Size—69′ 6″ dia. x 30′ 0″ deep Capacity 105,000 cu. ft.: Remove bottom covers bars of girders and supply short angle straps. Clean, repair and paint inside of columns. Bush rollers and new shafts. Paint Holder		895.00	23,857.00
Miscellaneous: General Inspection of Running Machinery, Gauges, etc.			2,000.00
Total			$37,299.44

[fo. 3788] Consolidated Gas Company—East 15th Street Holder Station

Boiler House "R-2":

Davidson Simple- Steam Pump—1 Size 7½″ x 5″ x 12″ Center Packed Plunger:			
Replace 1 Cap Screw Pin	$2.46		
Replace 1 Bolt Pin	2.46		
Replace 2 Steel Bushings	6.92		
Replace Piston Rod—1	27.52		
		$39.36	
Babcock & Wilcox Boilers—3 70— 4″ Tubes, 16′ 0″ long:			
Weld crack in C. I. Front	$3.00		
Point up 75 sq. ft. of Brick with High Tempite	4.13		
Regrind Safety Valve	2.92		
		10.05	
Steel Stack, 5′ 0″ dia. x 110′ 0″ high: Paint		37.99	
Knowles Duplex Steam Pump Size—6″ x 4″ x 6″: Overhaul		17.52	
Pipe Covering: 59′ 0″ of Std. Magnesia Pipe Covering, with Canvas		69.18	
Pipe Repairs: Small Piping: Repack 4 Valves and Replace 2 Valves		8.56	
			$182.66

Consolidated Gas Company—East 15th Street Holder Station—Continued

Exhauster House "R":

Connersville Exhauster 84 cu. ft. per revolution No. 7322 Direct connected to Fitchburg Vertical Steam Engine: Overhaul Eccentric Strap		11.58	
[fol. 3789] Pipe Repairs:			
Small Piping: Repack 6 Valves: Replace 1 Pipe Gasket, 1 Union and 12' of Pipe	$6.96		
Large Piping: Repair 1 B. S. Joint	6.75	13.71	25.29
Holders:			
3 Lift Storage Holder- Steel Tank, 193' 2" dia. x 41' 9¼" deep Capacity—3,000,000 cu. ft. No. 9:			
Replace 1 Piece Flagstone Coping		6.22	
Relay 5' 0" x 2' 0" x 1' 6" of Red Brick—2 times		36.22	
Repoint 16 Places, 6' 0" x 26' 0" plus 20% of Brickwork		449.25	491.69
Miscellaneous:			
General inspection of running machinery, gauges, etc			500.00
Total			$1,199.64

[fol. 3790] Consolidated Gas Company—East 111th Street Holder Station

Boiler House "C":

Bigelow Boilers—3 90- 3" Tubes, 16' 0" long Works Nos. 4, 7, 8:			
Patch Brickwork	$12.50		
Weld 3 cracks, Boiler No. 8	9.00		
Weld Ash Door, Boiler No. 8	3.00		
Weld crack, 18", Boiler No. 4	6.00		
Replace C. I. Fire Doors, Boiler No. 8	6.48		
Replace 3 Blow-off Cocks	94.17		
Replace C. I. Brace, T shaped	33.66		
Paint Breeching, 3' 0" x 4' 0" x 24' 0" long	7.40		
Paint Stack, 4' 0" dia. x 68' 0" high	18.79		
		$191.00	
Knowles Duplex Steam Pumps—2 Size—6" x 4" x 7" Serial No. 47270 plus 71, and Serial No. 47272 plus 73:			
Replace Links—4	$25.52		
Replace Cross Shafts—2	16.68		
Overhaul Valve Motion—2	11.68		
Repack Pump No. 47270	7.30		
		61.18	
Sturtevant Undergrate Blower—1 Type TU-1: Overhaul		116.45	
Pipe Repairs:			
Small Piping: Repack 8 Valves: Replace 1 Valve and 8 Gaskets		16.14	$384.77

Consolidated Gas Company—East 111th Street Holder Station—Continued

Exhauster House "B":

Blake Simple Steam Pump—1 Size—8" x 5" x 12" Serial No. 201145:			
Overhaul Valve Gear	$8.76		
Replace Rocker Arm Shaft	8.34		
Repack Steam and Water Ends	7.73		
		$24.83	
Pipe Repairs, Large Piping: Repair 6 Bolt Leaks & 1 B. S. Joint: Replace 1 Gasket	9.42		
		34.25	
[fol. 3791] Weight House "H":			
20-Ton Compound Lever Platform Scale, Platform, 8' x 18': Repair			500.00
Filter "W":			
Loomis Manning Steel Sand Filter Size—8' 0" dia. x 6' 0" high: Paint Covering			5.52
Holders:			
Holders—2 Steel Tank, 192' 9" dia. x 40' 1" deep Capacity—5,000,000 cu. ft.			
Works No. 1 and 2:			
Point up 275 sq. ft. of brick foundation		$41.25	
Remove Outside Stiffeners on 5 Shells of both holders—Repair and adjust Rollers—Caulk Leaks—New Guard Railing and Bridges—Paint		46,586.00	
			$46,627.25
[fol. 3792] Coke Handling plant "I":			
Coke Screening Unit, 30' 0" x 70' 0" x 65' 0" high:			
Replace 4 Plates, 2' 0" x 12' 0" x 1/4" 2 Plates, 2' 0" x 3' 0" x 3/16"	$43.65		
Replace Steel Screening, 3 pieces, 3' 2" x 4' 0" x 1/4", 2 pieces, 3' 8" x 4' 2" x 1/4", 2 pieces, 3' 9" x 4' 2" x 1/4"	153.00		
		$196.65	
Bulkhead "U":			
Steel Lined Wooden Hopper—1 Size—10' 0" x 10' 0" x 4' 0" deep:			
Replace 1 Steel Plate, 3' 7" x 0' 10-1/2" x 4' 3" x 3' 1", 1/4" thick	$12.00		
Repair Wood Railing, 2" x 4" x 20' 0" long	1.43	13.43	
			210.08
Miscellaneous:			
General Inspection of Running Machinery, Gauges, etc.			500.00
			$48,261.87

[fol. 3793] Consolidated Gas Company—West 44th Street Holder Station

Exhauster and Boiler House "Q":		
Steel Stack, 1' 8" dia. x 15' 0" high: Paint	$1.74	
Worthington Duplex Steam Pump—1 Size—4" x 4" x 4": Overhaul and Repack	24.66	
Vertical Boiler—1 4' 0" dia. x 10' 0" high—130—2" Tubes: Replace	946.33	
Vertical Boiler—1 3' 0" dia. x 9' 0" high—45—2" Tubes: Replace	466.19	1,438.92
Yard:		
Renew 2" Steam Line from Boiler Room to West Side Holder No. 5	500.00	
Renew 2" Steam Line from Water Meter to Holders and Governor House	500.00	1,000.00
Holders:		
Holder—1 Brick Tank, 185' 3" dia. x 41' 5" deep Lifts—2 Capacity—2,000,000 cu. ft. Works No. 5:		
Bush 12 Rollers and New Shafts—6 New Rollers and Shafts—Repair Bullet Hole Clean and Paint Inside of Columns	1,515.00	
Point up 100 sq. ft. of Brickwork	15.00	1,530.00
Miscellaneous:		
General Inspection of running Machinery, gauges, etc.		300.00
		$4,268.92

[fol. 3794] Consolidated Gas Company—West 65th Street Holder Station

Boiler House "P":		
Pumps—2 Made by M. T. Davidson Size—7 1/2" x 5" x 12" Nos. 13145 and 13154:		
Replace Cap Screws—2	$4.92	
Replace Bolts—2	4.92	
Renew Gaskets between Cylinder and Frame	5.38	
Repack	7.73	$22.95
Boilers—3 Made by Babcock & Wilcox Co. Tubes—70—4" x 16' 0" long Works Nos. 6, 7 & 8:		
Overhaul 6—2 1/2" Blow-off Valves	8.34	
Reseat 4" Safety Valve	2.78	
Replace 96 Grate Bars	412.97	424.09

Consolidated Gas Company—West 65th Street Holder Station—Continued

Steel Stack, 5' 0" dia. x 110' 0" high:			
Paint		37.80	
Forced Draft Fan Blower—1 Capacity—14,040 cu. ft. per min. Direct connected to Troy Vertical Engines—2 Size—5" x 7":			
Rebabbitt 2 Bearings, 2 3/8" x 11"	35.36		
Overhaul 2 Engines	23.36		
		58.72	
Pipe covering: 42' of Std. Magnesia Pipe Covering with Canvas		35.22	
		35.22	
Pipe Repairs, Small Piping:			
Repack 1 Valve and 1 Injector Gland Replace 2 Ells, 2 Pipe Gaskets, 1 Pet Cock and 5' 0" of Pipe		16.47	
			8595.44
[fol. 3795] Engine and Valve House "B":			
Turbine—1 Made by General Electric Co. Type—Curtis, 150 H. P. No. 11154 Direct connected to Centrifugal Compressor—1 Made by General Electric Co. No. 3879.			
Replace Sleeve on Outboard Bearing	812.76		
Replace Gasket under Gland (Turbine)	1.16		
Repack Governor Valve Stem	1.96		
Overhaul Centrifugal Compressor	885.94		
		8900.92	
Engine—1 Made by Buckeye Engine Co., Salem, Ohio Type—Vertical No. 6240:			
Overhaul Link and Valve Gear	$23.36		
Replace Wire Screening, 1/8" Wire, 1" mesh	21.00		
Refasten Guard	5.84		
		50.20	
Pipe Repairs, Small Piping: Repack 5 Valves, Replace 1 Pipe Gasket, Replace 1 Valve		5.86	
			956.98
Watchman Office "D":			
10 Ton Wagon Scale Platform, 8' 0" x 14' 0": Replace Platform, 3" plank, and Stringer, 8" x 8"			62.81
Renew Steam Lines from Boiler Room to Holders Nos. 7 & 8			2,500.00

Consolidated Gas Company—West 65th Street Holder Station—Continued

[fol. 3796] Holders:

Holder—1, Brick Tank, 187' 0" dia. x 43' 6" deep Capacity—4,000,000 cu. ft. Lifts 4 Works No. 7:			
Repoint 300 sq. ft. of Brickwork	$45.00		
Replace New Sheets and Paint Holder, including Landing of Holder, Emptying, Refilling, Cleaning, etc.	29,495.00		
		$29,540.00	
Holder—1, Brick Tank, 187' 0" dia. x 43' 6" deep, Capacity—4,000,000 cu. ft. Lifts—4 Works No. 8:			
Repoint 300 sq. ft. of Brickwork	45.00		
Remove Shell Stiffeners and Paint Holder	12,535.00		
		12,580.00	
			42,120.00
Miscellaneous: General Inspection of Running Machinery, Gauges, etc.			500.00
Total			$46,735.33

[fol. 3797] Consolidated Gas Company—West 132nd Street Holder Station

Boiler House "B":

Pump—1, Made by Blake Knowles Co. Size—6" x 4" x 6" No. 140858 and 9:			
Replace Cross-shafts	$15.68		
Replace Pin	2.46		
Repack 5 Outside Plunger Glands	7.73		
		$25.87	
Pump 1—Made by Worthington Pump & Machinery Corp. Size—4½" x 3¾" x 4" (Duplex) No. 61,259: General Overhauling, including New Liners, New Valve Seats, New Valves and Piston Rods			32.52
Boilers—3, Made by Babcock & Wilcox Co. Tubes—80—4" x 16' long, Drums—1—42" dia. x 21' 2-11/16" long, Works No-. 1, 2, & 3:			
Point up Brickwork with High Temp-ite	$30.50		
Repair Plug Valve on Boiler No. 1 Blow-off	2.92		
Repaint Brickwork on Top of Boiler No. 1	18.00		
		51.42	
Turbine Blower—1, Made by Wing Mfg. Co., New York, Size—16": Replace Cast Iron Inside Ring, 17" dia. x 4½" face, ¼" thick			8.10

Consolidated Gas Company—West 132nd Street Holder Station—Continued

Pipe Covering: 2' 0" of Std. Magnesia Pipe Covering with Canvas	1.60	
Pipe Repairs, Small Piping: Repack 5 Valves, Replace 2 Valves, Replace 1 Union, Replace 2 Pipe Gaskets, Replace 65' 0" of Galv. Pipe	167.40	
		$286.91

[fol. 3798] Governor House "A":

Engine—1, Made by Buckeye Engine Co., Salem, Ohio, Size—16½" x 24" No. 6132: Overhaul	$700.99	
Engine—1, Made by Buckeye Engine Co., Salem, Ohio, Size—16½" x 24" No. 5296 Direct connected to Exhauster—1, Made by P. H. & F. M. Roots Size—11½": Renew 85 ft. Manila Rope, 1⅜"	12.95	
Boiler Blow-off Tank, Size 3' 0" dia. x 9' 0" long: Paint	2.02	
Pipe Repairs, Small Piping: Replace 6" of Pipe, Repair 3 Bolt Leaks	2.37	
		718.33

Holders:

Holder—1, Steel Tank, 190' 10" dia. x 41' 0" deep. Capacity—5,000,000 cu. ft., Works No. 2: Repair and Adjust Rollers, Caulk Leaks, New Guard Railing and Paint		10,659.00

Miscellaneous:

General Inspection of Running Machinery, Gauges, etc		500.00
		$12,164.24

[fol. 3799] Consolidated Gas Company—Kingsbridge Holder Station

Boiler and Governor House "A":

Balanced Governor—1, Made by Isbell Porter Mfg. Co., Size—36": Solder Leaks in Governor Float	5.36	
Babcock & Wilcox Boilers—3 120—4" Tubes, 18' 0" long, Steel Stacks, 5' 0" dia. x 52' 0" high—1: Paint	17.95	
Pipe Covering: Reing 5 sq. ft. on Steam Separator—1' 8" of Std. Magnesia Pipe Covering, with Canvas	6.77	
Pipe Repairs, Small Piping: Repack 5 Valves, Replace 10' 4" of Pipe, Replace 1—Tee, Replace 2 Gaskets, Regrinding 1 Valve, Gromets on Bolts, 3	20.77	
		50.85

Yard:

Pump—1, Made by A. S. Cameron Pump Co. Size—5" x 4" x 7": Repack Gland on Steam End		3.87

Holders:

Holder—1, Steel Tank, 251' 3" dia. x 46' 4" deep. Capacity—10,000,000 cu. ft., Works No. 1: Caulk Leaks and Paint		6,302.00

Miscellaneous:

General inspection of running machinery, gauges, etc		500.00
		$6,856.72

[fol. 3800] In United States District Court, Southern District of New York

In Equity. No. 26-366

Consolidated Gas Company of New York, Plaintiff,

against

Albert Ottinger, as Attorney-General of the State of New York, Defendant

Stipulation as to Plaintiff's Exhibits Nos. 866, 866X, 866A, and 866AX

It is stipulated and Agreed that Plaintiff's Exhibits Nos. 866, 866X, 866A and 866AX, consisting of summary pages and 194 numbered pages, which are entitled "Inventory and Appraisal of the Property of The Astoria Light, Heat and Power Company Used in Its Gas Business as of June 1st, 1923," be not printed in full, but that there be printed in lieu thereof, the following pages:

Page 2—entitled "Value of the Property of the Astoria Light, Heat & Power Co., Used in Its Gas Business as of June 1st, 1923";

Page entitled "Page 2 of Plaintiff's Exhibit 866 corrected, Value of the Property of The Astoria Light, Heat & Power Co., Used in its Gas Business as of June 1st, 1923," marked Plaintiff's Ex. 866-X, 6/16/24;

Page 2A—entitled "Value of the Property of The Astoria Light, Heat & Power Co., Used in its Gas Business as of June 1st, 1923," marked Pl. Ex. 866A;

[fol. 3801] Page entitled "Page 2A of Plaintiff's Exhibit 866A corrected, Value of the Property of the Astoria Light, Heat & Power Co., Used in Its Gas Business as of June 1st, 1923," marked Plaintiff's Ex. 866AX, 6/16/24;

Page 3 to 8—entitled "Notes regarding Certain Necessary Elements of Cost in Reproducing the Property of the Company";

Pages 9 and 9A—entitled "General Summary of Costs".

It is further Stipulated and Agreed by the defendant Attorney General and appellant, but only for the purposes of this appeal:

(a) That all the apparatus, foundations and miscellaneous physical properties set forth in Plaintiff's Exhibits Nos. 866, 866X, 866A and 866AX, were in existence on June 1, 1923;

(b) That all the apparatus, foundations and miscellaneous physical properties set forth in Plaintiff's Exhibits Nos. 866, 866X, 866A and 866AX, were used and useful in the business of The Astoria Light, Heat and Power Company and/or plaintiff and appellee on June 1, 1923;

(c) That the quantities, units, unit prices and total cost contained in Plaintiff's Exhibits Nos. 866, 866X, 866A, and 866AX, are a correct estimate of the cost to reproduce as [fol. 3802] of June 1, 1923, each and every item on a labor, material and subcontract basis as the same is described in the testimony of Alten S. Miller, upon the trial; provided, however, that this stipulation does not apply to any figures contained on pages 2 and 2a, grand summary, entitled "Value of the Property of The Astoria Light, Heat and Power Company used in its Gas Business as of June 1st, 1923," in so far as they relate to the items of land, street mains, and services, or in so far as they appear in any other exhibits which are printed in this record in full, and that appellant does not concede that the elements set forth in pages 3, 4, 5, 6, 7 and 8, entitled "Notes Regarding Certain Necessary Elements of Cost in Reproducing the Property of the Company," are properly included in such an estimate of the cost to reproduce or are in the proper amount, but as to which elements appellant reserves the right to contest upon this appeal the propriety and amount of any or all thereof.

Dated New York, April 27, 1926.

——— ———, Solicitor for Plaintiff and Appellee.
——— ———, Solicitor for Defendant Attorney General and Appellant.

[fol. 3803] PLAINTIFF'S EXHIBIT No. 866

Value of the Property of the Astoria Light, Heat & Power Co. Used in Its Gas Business as of June 1st, 1923

Land as appraised by Mr. Robert Huntley (G-110)	$5,291,000
Buildings as appraised by Mr. Henry R. Burt (221)	5,860,332
Manufacturing Plants and Holders (Other than Land and Buildings) (G121, G122a, G122c, 221 G141a, 222, G141b, G143b, G145, G143a, 224, 225, 238)	19,546,565
Special Reinforced Concrete Bulkhead, as appraised by Mr. C. E. Trout	528,605
Street Mains as appraised by Mr. Colin C. Simpson (231)	6,713
Services as appraised by Mr. Colin C. Simpson (232)	232
Meters, Cocks, etc., as shown on the books of the Company (233 and 234)	117
Tools and Implements, as shown on the books of the Company (237)	143,607
Gas Appliances, as shown on the books of the Company (236 and 239)	10
General Equipment, including Stable Equipment, Automobiles, Boats and Scows, as shown on the books of the Company (G122a, G122d)	54,804
Furniture and Fixtures, including Mess Hall contents and Miscellaneous Lockers, as shown on the books of the Company (G122a)	51,551
Omissions and Contingencies	977,328
Organization and Development prior to Construction (101 and G102)	2,330,000
Cost of Financing	2,450,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	3,499,541
Interest during Construction (G285)	3,713,725
Taxes during Construction (G284)	453,810

Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	760,477
Working Capital (1, G10, 3, 5, 313, 321, 322, 323, 324 and 332)	3,400,000
Total	$49,068,417

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3804] PLAINTIFF'S EXHIBIT No. 866-X

Page 2 of Plaintiff's Exhibit 866 Corrected Value of the Property of The Astoria Light, Heat & Power Co. Used in Its Gas Business as of June 1st, 1923

Land, as appraised by Mr. Robert Huntley (G-110)	$5,291,000
Buildings, as appraised by Mr. Henry R. Burt (221)	5,860,332
Manufacturing Plants and Holders (Other than Land and Buildings) (G121, G122a, G122c, 221, G141a, 222, G141b, G143b, G145, G143a, 224, 225, 238)	19,167,711
Special Reinforced Concrete Bulkhead, as appraised by Mr. C. E. Trout	528,605
Street Mains, as appraised by Mr. Colin C. Simpson (231)	6,713
Services, as appraised by Mr. Colin C. Simpson (232)	232
Meters, Cocks, etc., as shown on the books of the Company (233, 234)	117
Tools and Implements, as shown on the books of the Company (237)	143,607
Gas Appliances, as shown on the books of the Company (236, 239)	10
General Equipment, including Stable Equipment, Automobiles, Boats and Scows, as shown on the books of the Company (G122a, G122d)	54,804

Furniture and Fixtures, including Mess Hall contents and Miscellaneous Lockers, as shown on the books of the Company (G122a)	51,551
Omissions and Contingencies	958,385
Organization and Development prior to Construction (101, G102)	2,304,000
Cost of Financing	2,422,500
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	3,447,827
Interest during Construction (G285)	3,672,705
Taxes during Construction (G284)	453,810
Administrative, Legal and Misc. General Expense during Construction (G282, G283, G-286)	749,239
Working Capital (1, G10, 3, 5, 313, 321, 322, 323, 324, 332)	3,400,000
Total	$48,513,148

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3805] PLAINTIFF'S EXHIBIT No. 866-A

Value of the Property of the Astoria Light, Heat & Power Co. Used in Its Gas Business As of June 1st, 1923

Land as appraised by Mr. F. K. Stevens (G110)	$4,406,100
Buildings as appraised by Mr. Henry R. Burt (221)	5,860,332
Manufacturing Plants and Holders (Other than Land and Buildings) (G121, G122c, G122e, 221, G141a, 222, G141b, G143b, G145, G143a, 224, 225, 238)	19,546,565
Special Reinforced Concrete Bulkhead, as appraised by Mr. C. E. Trout	528,605
Street Mains as appraised by Mr. Colin C. Simpson (231)	6,713

Services as appraised by Mr. Colin C. Simpson (232)	232
Meters, Cocks, etc., as shown on the books of the Company (233 and 234)	117
Tools and Implements, as shown on the books of the Company (237)	143,607
Gas Appliances, as shown on the books of the Company (236 and 239)	10
General Equipment, including Stable Equipment, Automobiles, Boats and Scows, as shown on the books of the Company (G122a, G122d)	54,804
Furniture and Fixtures, including Mess Hall contents and Miscellaneous Lockers, as shown on the books of the Company (G122a)	51,551
Omissions and Contingencies	977,328
Organization and Development prior to Construction (101 and G102)	2,270,000
Cost of Financing	2,390,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	3,499,541
Interest during Construction (G285)	3,562,541
Taxes during Construction (G284)	453,810
Administrative, Legal and Misc. General Expense during Construction (G282, G283), and G286)	760,477
Working Capital (1, G10, 3, 5, 313, 321, 322, 323, 324 and 332)	3,400,000
Total	$47,912,333

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3806] PLAINTIFF'S EXHIBIT No. 866-A-X

Page 2-A of Plaintiff's Exhibit 866-A Corrected

Value of the Property of the Astoria Light, Heat & Power Co. Used in Its Gas Business As of June 1st, 1923

Land as appraised by Mr. F. K. Stevens (G110)	$4,406,100
Buildings as appraised by Mr. Henry R. Burt (221)	5,860,332
Manufacturing Plants and Holders (Other than Land and Buildings) G121, G122a, G122c, 221, G141a, 222, G141b, G143b, G145, G143a, 224, 225, 238)	19,167,711
Special Reinforced Concrete Bulkhead, as appraised by Mr. C. E. Trout	528,605
Street Mains as appraised by Mr. Colin C. Simpson (231)	6,713
Services as appraised by Mr. Colin C. Simpson (232)	232
Meters, Cocks, etc., as shown on the books of the Company (233 and 234)	117
Tools and Implements, as shown on the books of the Company (237)	143,607
Gas Appliances, as shown on the books of the Company (236 and 239)	10
General Equipment, including Stable Equipment, Automobiles, Boats and Scows, as shown on the books of the Company (G122a, G122d)	54,804
Furniture and Fixtures, including Mess Hall contents and Miscellaneous Lockers, as shown on the books of the Company (G122a)	51,551
Omissions and Contingencies	958,385
Organization and Development prior to Construction (101 and G102)	2,224,000
Cost of Financing	2,362,500
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	3,447,827
Interest during Construction (G285)	3,521,521
Taxes during Construction (G284)	453,810

Administrative, Legal and Misc. General Expense during Construction (G282, G283), and G286)	749,239
Working Capital (1, G10, 3, 5, 313, 321, 322, 323, 324 and 332)	3,400,000
Total	$47,357,064

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3807] Notes Regarding Certain Necessary Elements of Cost in Reproducing the Property of the Company

Working Capital

(Accounts No. 1, G10, 3, 5, 313, 321, 322, 323, 324 and 332)

Working Capital may be defined as the total floating or mobile capital required in addition to the fixed capital. It may be in the form of Current Assets or in the form of Materials and Supplies. For the efficient and economical carrying on of the multitudinous transactions of daily operation, money has to be put into things which are not reflected in the fixed capital accounts as of any particular date of inventory, and a reservoir of cash has to be kept on hand, so as to handle current transactions promptly and economically. These elements of outlay and investment—representing property and assets actually and necessarily used in the carrying on of the gas business—are grouped as "Working Capital," to the end that they may be included in the property and investment upon which a rate yielding a fair return is to be computed.

The Uniform System of Accounts for gas corporations defines the capital of such corporations to be and mean all property devoted to the rendering of the services of the production of the commodities which are within the purposes of the corporation. Capital, other than "Fixed Capital," is called "Floating Capital," and "Floating Capital" is divided into two major groups—"Materials and Supplies" and "Current Assets." Current Assets include "Cash," "Accounts Receivable," "Bills Receivable," etc.

Working Capital may perhaps best be considered in relation to these two elements separately.

The first element covers general stores and supplies. It covers the cost, including transportation of all materials and supplies acquired by the company for its gas operations.

The second element covers the funds necessary to meet payments incidental to the ordinary conduct of the business for the prompt payment of bills in order to procure trade discounts for advance payments which good business judgment makes necessary or desirable, and for the purchase of materials advantageously as to price, quantity and time. It also covers the floating assets for which expenditure has been made, but which are not yet reflected in fixed capital accounts, or for which collections have not been made. In this latter category are (1) accounts receivable, representing outlays for which moneys are due the company and have been billed to consumers, purchasers of appliances and other debtors; and (2) the sums which will later be billed to consumers for gas manufactured by the company and already used by such consumers, but which have not yet been billed. The company has already used and paid for oil, coal and other materials, and labor, in making this gas. On the average, about twenty days elapse between the furnishing of gas to a consumer, and the sending him of the bill which transfers the debt to the status of an accounts receivable. Unless this element of gas furnished but not yet billed is allowed as a part of working capital, investors in the company will be denied a return on a quantity of assets for which they have had to provide funds.

[fol. 3808] I have calculated the necessary Working Capital of the complainant, as above stated, to be for the company, the figure shown on the General Summary Sheet (Page 2), of the volume.

Concerning Undistributed Structural Costs

There are certain expenditures incident to the construction of a plant for making and distributing gas, all of which were made to some degree in constructing this property, under the costs and conditions from time to time prevailing, and all of which would have to be made under present costs and conditions to the extent now shown in

reproducing this property as of the present time, and yet which cannot be accurately apportioned among the various inventoried items. These elements of unavoidable expenditures include:

Omissions and Contingencies.
Organization and Development Prior to Construction.
Cost of Financing.
Engineering and Superintendence, and General Contractor's Expense and Profit.
Interest during Construction.
Taxes during Construction, and
Administrative, Legal and Miscellaneous General Expense.

In making an inventory and appraisal of the reproduction cost of this complainant's property, I considered separately what would probably be the expenditures for such of the several services named, taking into account all the available facts bearing on the conditions and cost of reproducing this plant and system. In working out such an estimate of required outlays, I took the construction period as beginning when the sponsors or promoters of the project have secured the agreemnt of bankers to supply necessary funds. For the purpose of computing Undistributed Structural Costs, I have used a period of two years, not because it would be reasonably possible to complete the plant and distributing system in that period, but because it is a minimum period, and, if the period should be extended, the undistributed structural costs will be increased.

Omissions and Contingencies

In estimating the cost of reproducing a gas manufacturing plant and appurtenant structures and equipment, allowance has to be made, as a practical matter, for omissions and contingencies, covering the following:

(1) A portion or percentage of the small units or items of machinery tools, implements and other property are always overlooked in the inventory, but their reproduction has to be provided for, nevertheless, in any present estimate.

(2) Small units of material, mechanism and supplies are lost or destroyed during construction. As to many items

of materials and supplies, a larger quantity has to be delivered and paid for than could ever be checked up now, in the completed structures and equipment.

[fol. 3809] (3) Other contingencies arise; for example, strikes or labor difficulties, interruption or delaying of work from adverse weather, delay in shipments, or other conditions, unforeseen extra work, factors affecting the suitability or advisability for use of materials, supplies, machinery, parts, etc., as needed, and the like. Expense arises in all such connections, for which advance provision has to be made in estimating cost to reproduce as of today.

The sum which I have estimated as necessary for the item Omissions and Contingencies, as to this company is that shown on the General Summary Sheet (Page 2). It amounts to about five per cent on the cost of reproducing the apparatus, plant equipment, etc., exclusive of the buildings and the distributing system.

Organization and Development Expenses Prior to Construction

(P. S. C. Accounts 101 and G102)

This item covers the services and expenses necessary in the organization and development of the company from the time of the inception of the project to the time when the charter, franchises, local consents, permits, etc., have been procured, agreements obtained for the furnishing of the requisite capital and the project brought to a point where construction can be commenced.

The costs comprised under this heading cover the compensation, on a reasonable salary basis, for the services of the sponsors; the salaries of stenographers, clerks and other assistants; general expenses, such as rent and traveling expenses; the expenses for obtaining the charter, including incorporation fee and the payment to the State on capital stock; expenses in connection with obtaining ordinances, franchises, permits and local consents, the cost of the many aspects of legal and engineering advice that is pre-requisite; other technical expenses; interest on expenditures incurred during this period, advertising, etc.

From the whole situation with respect to this company, I am of the opinion that a reasonable cost for Organization and Development prior to construction for the company, is the figure shown on the General Summary Sheet (Page 2), and that this expense could not be met as of the present time with a small outlay.

Cost of Financing

There is an additional element of cost, separate and distinct from bond discount, which will be incurred in reproducing this property. This cost covers services as real and necessary as those of the lawyers, engineers, or of the mechanics on the work.

The expense of assembling the necessary capital is ordinarily reflected in the difference between the actual sale price of the securities to the ultimate investors and what the company itself realizes from such securities. One element in this difference represents the reasonable compensation for bankers' services in marketing the securities and forwarding the funds yielded. It covers individual and corporate expenses, and the expenses of examination, negotiation, advertising and selling through all the various stages until the sale to the ultimate investor is accomplished. Such an expense would be incurred even if the utility company dispensed with bankers and marketed its securities through its own salesmen and agents. In fact this latter method undoubtedly would require more time and cost more than if recourse were had to an existing banking house with an established reputation and clientele.

[fol. 3810] Another element in cost of financing arises out of underwriting under the conditions of hazard as to the launching of such an enterprise, in such a community at this time. A third element is the necessary legal and other expense necessary in the issuance of stocks and bonds, including printing, fees of Trustees and Registrars, etc. These elements of necessary expense, comprehending the cost of the organization furnishing services to the company, seem to me to be in the same class with the cost of services furnished by the engineering, legal and administrative organization of the company, and therefore

constitute a part of the cost of reproduction. This element of Cost of Financing is a very substantial factor and the allowance which I have made and shown on the General Summary Sheet (Page 2), representing approximately five per cent on the project, is substantially below the figure for which this service could, in any probability, be procured under present conditions.

Engineering, Superintendence and General Contractor's Expense and Profit

Account No. G281

Engineering work, including general design to provide for the construction of large gas properties, calls for a kind of experience not generally possessed by the operating engineers connected with such companies. In the case of this company, there is every reason to suppose that it would be cheaper to secure the services of engineers fully equipped to handle designing work on a large scale than it would be to organize an engineering force for the purpose of making designs.

Work under this heading includes location surveys, general and detailed designs and drawings, preparation of specifications and such general supervision over the work during construction as to insure that the work is being carried out in accordance with the general plans. This is not intended to cover any of the detailed inspection either of the quality of the material or of the placing of the material, but it covers general supervision only and the preparation of detailed plans.

It is found to be much cheaper and more expeditious to let to a general contractor, who has the organization and equipment to build large plants and to install large distribution systems, than it is to organize and train a special construction force and to buy the necessary equipment in order to build such plants and install such distribution systems. If the utility company organizes a construction department and buys the construction plant, the chances of saving anything in cost are slight, and, on the other hand, the chances of material increase in cost due to the risk of working with a new and uncoordinated staff

are very great. Almost every investor has knowledge of cases where enterprises have cost far more than the amount of the original estimates due to the placing of construction work in the hands of company employees, or contractors not qualified to handle it. The chance of the utility finding a man able and ready to organize a construction force and to assemble at a reasonable expense a construction plant is small; in fact, the chances are all against the utility in this respect and a wise management would save money by putting the work into the hands of contractors regularly organized for this class of work.

[fol. 3811] The work under this heading includes providing a construction plant, securing and tabulating bids from sub-contractors and placing orders for buildings and apparatus, ordering and assembling material not included in sub-contractors' estimates and placing and erecting this material, checking material and sub-contractors' work and paying for same, co-ordinating the work of the sub-contractors and of the general contractor and taking all necessary steps to secure the delivery of the required materials and parts of apparatus or buildings in such time and in such order as to insure the completion of each part of the plant and of the entire plant in the allotted time, and to reduce as much as possible the delays due to lack of prompt delivery of materials and mutual interference of the various working forces. It would require at least the figure shown on the General Summary Sheet (page 2), for the company to cover the Cost of Engineering, Superintendence, and General Contractors' Expenses and Profit.

Interest During Construction

(Account No. G285)

Included in this category is the interest accruing upon the moneys (and credits available upon demand) acquired for use in connection with the construction and equipment of the property from the time of such acquisition until the construction is ready for use. This item also covers reasonable charges for interest for the construction period on the company's own funds used for construction purposes during such periods.

For the computation of interest during construction, the period of construction is defined to begin with the agreement of bankers to supply the funds necessary for construction, and to end when its operation begins.

For the purpose of computing the interest, it is assumed that the property would go into operation two years after the beginning of construction. All of the land would have to be purchased before beginning construction, and interest upon it should be figured for two years. An interest rate of eight per cent is taken for the obtaining of the requisite new capital by a gas company in this territory. As to cost of buildings and apparatus, and the cost of engineering, superintendence, administrative and legal service, and miscellaneous general expense, interest should be calculated for one year, at the eight per cent rate. There is also to be included interest at 8% during the two year construction period on the organization and development expenses prior to the beginning of construction.

The proper provision for Interest During Construction is the figure shown on the General Summary Sheet (Sheet 2).

Taxes During Construction

Included in this category are the various taxes and assessments levied by public authority and payable on property belonging to the corporation during the period of construction and before the plant is open for commercial operation. Taxes incident to operation only are not included, nor are the special taxes assessed for street and other improvements, such as grading, paving, sidewalks, guttering, etc., which are chargeable to the account to which is charged the particular property benefitted.

[fol. 3812] Taking into account the period elapsing between a given construction expenditure and the first payment of taxes thereon, it is deemed proper to include taxes on land for a period of two years, and on improvements for a period of six months at the 1923 rate and assessed valuation.

On this basis, the required provision for Taxes During Construction is the figure shown on the General Summary Sheet (page 2).

Construction is the figure shown on the General Summary Sheet (page 2).

Administrative, Legal and Miscellaneous General Expenses

(Account Nos. G282 and G286)

Included in this category are the salaries and expenses of executive and general officers, auditor, bookkeepers, timekeepers, inspectors and other employees of the company; the rent and expenses of the general office, insurance during construction, legal and court expenses, including the printing of briefs, legal forms, testimony, reports, etc.; payment to referees or arbitrators for the settlement of disputed questions; costs of suits for other causes than injuries to persons and payment of special fees, etc.; the expenses of the taking of depositions; also all construction and equipment items of a special and incidental nature not provided for under any other heading in this inventory.

During the construction period the administrative officers and legal department must look after many details. Bookkeeping, auditing and paymaster's departments must be organized to care for and account for the funds. Timekeepers and inspectors must check the delivery and quality of material and the amount and progress of the work so that the contractor may be paid from time to time without danger of being overpaid. The development of satisfactory public relations requires the attention of the general officers and as far as possible of everybody in the organization during this period. Negotiations and formalities incident to the issuance of securities have to be undertaken and completed. Permits from the municipal departments for opening the streets must be secured and questions relating thereto frequently require the attention of the higher officials of the company. The general officers should examine the bids from the sub-contractors, advise as to the letting of sub-contracts and keep themselves informed regarding the status of the sub-contracts until the work covered by them is completed and the bills paid. During this same period an operating organization should be perfected and plans made for securing the business as rapidly as possible after the plant is put in operation.

The services and expenses of the administrative and legal staff, and the miscellaneous general expense, continue during the entire construction period.

staff, and the miscellaneous general expense, continue during the entire construction period.

For the item Administrative, Legal and Miscellaneous General Expenses, my estimate for the present required expenditures, aggregates the figure shown on the General Summary Sheet (page 2).

[fol. 3813] General Summary of Costs

Inclined Retort House, "I. R."	$1,992,433 24
Yard South of Inclined Retort House	64,359 71
Tar Extractor Inclined Retort House "W. T. E."	192,025 03
West Condenser House, "W. C."	158,937 34
West Purifier House, "W. P."	421,350 43
Horizontal Retort House, "H. R."	1,625,391 86
South of Horizontal Retort House	12,307 40
East Tar Extractor House, "E. T. E."	188,737 57
East Condenser House, "E. C."	158,403 82
East Purifier House, "E. P."	422,299 13
Tar & Ammonia Storage Tank, "U. T. 2"	72,424 68
Boiler House "B"	111,212 97
Exhauster House "E"	75,052 49
Meter House, "M"	70,406 93
"C" Generator House, "W. G. G."	871,354 63
Salt Water Condensers, "W. G. G."	188,954 12
Relief Holder No. 1, "W. G. H."	190,837 26
Tar Extractor House, "W. G. T. E."	16,417 10
Shaving Scrubbers, "W. G. S."	433,138 95
Purifier House, "W. G. P."	221,064 47
Generator House, "D. G."	1,037,645 93
Salt Water Condensers, "D. G. C."	225,706 50
Relief Holder #2, "D. H."	187,441 86
Tar Extractor House, "D. T. E."	26,678 35
Scrubbers, "D. S. S."	55,175 53
Purifiers, "D. P."	363,846 07
Boiler House, "D. B."	208,701 83
Boiler House, "W. G. B."	195,897 79
Exhauster House, "C" & "D"—"W. G. E."	123,436 16
Meter House, "W. G. M."	200,220 73
Storage Holders	2,434,982 80
Photometer House, "P"	2,551 16
Pump House, "W. G. P. H."	33,940 71
Tar Pump House, "P. H."	13,397 35
Purifier Pump House, "P. H. 2."	3,528 05

[fol. 3814] Brought forward	$12,600,259 95
Tar Drip Pump House X-25	1,281 59
Pump House N. S. P. H.	12,224 99
Pump House X-W.3	4,161 82
Pump House X-W.6	28,570 87
Fire Hose Houses #21-45	4,487 40
Electric Power Station	364,452 31
Ammonium Sulphate Building	113,165 06
Cyanogen Plant	23,587 17
Yards	86,995 39
Coal Handling Apparatus North Shore	378,000 00
Coal and Coke Handling	1,474,564 92
Ash Digger House X-H.-3	5,241 31
Berrians Island Oil Pump House, O. P. H.	7,220 23
Coal Sample House X. C. S.	922 05
Foamite System F. P. H.	33,010 08
Garage X. G.	174 87
Locomotive Shed Z-10	1,188 23
Miscellaneous Guards, Hand Rails, etc.	19,858 46
Oil Tanks Berrians Island	340,945 50
Pit for Tanks East of Ammonium Sulphate Plant	33,733 36
Pit Near Gate House	629 61
Tar Separation System W. G. T. S.	107,623 11
Yard North of Generator House C	11,244 75
Standard Gauge Rail Road System	1,101,413 87
Industrial Railroad System	118,042 24
Power Wiring	374,246 83
General Connections	1,432,360 13
Small Piping	866,958 90
Total	$19,546,565 00

[fol. 3815] PLAINTIFF'S EXHIBIT No. 867

Detail Expenditures Necessary to Put the Works of the Astoria Light, Heat & Power Company in the Condition in Which They Were When New

[fol. 3816] The Astoria Light, Heat & Power Co., Astoria, L. I.

Summary

Apparatus	Cost as of June 1, 1923
Inclined Retort House, I. R.	$210,632.24
Tar Extractor House, W. T. E.	73.78
West Condenser House, W. C.	74.56
West Purifier House, W. P.	24.08
Horizontal Retort House, H. R.	180,918.55
Tar Extractor House, E. T. E.	386.01
Boiler House, B	2,897.79
Exhauster House, E	226.71
Meter House M	755.49
"C" Generator House, W. G. G.	53,187.91
Salt Water Condensers C Unit, W. G. C.	357.12
Relief Holder, W. G. H. No. 1	841.56
Tar Extractor House, W. G. T. E.	1,203.52
Shaving Scrubbers, W. G. S.	58.00
Purifier House, W. G. P.	6.69
Generator House, D. G.	591.22
Condensers, D. G. C.	393.12
Relief Holder, D. H.	841.56
Purifiers, D. P.	120.32
Boiler House No. 2, D. B.	543.29
Boiler House, W. G. B.	2,888.74
Exhauster House, W. G. E.	1,332.02
Storage Holders	8,293.84
Pump House, W. G. P. H.	752.81
Tar Pump House, P. H.	292.48
Pump House, N. S. P. H.	23.36
Electric Power Station	2,220.67
Ammonium Sulphate Building	2,558.60
Cyanogen Plant, X. C. F.	1,428.64
Yards	67.05
Coal Handling Apparatus (North Shore)	348.64

Apparatus	Cost as of June 1, 1923
Coal & Coke Handling	29,458.92
Berrians Island Pump House, O. P. H.	23.36
Oil Tank, Berrians Island	749.22
Oil Tanks, W. G. T.	80.50
Tar Separating System, W. G. T. S.	217.00
Miscellaneous	5,000.00
Total	$509,869.37

Inclined Retort House I. R.:

Battery #2:			
Replace 1 Buckstay 2—12" Channels x 37' 8" long with spacers 1890# @ $ 1215		$229 64	
Benches Nos. 2, 3 & 4:			
Furnace iron work including steam distributors 673 51 x 3	2020 53		
Rebuild furnace (for detail see page 6) 472 27 x 3	1416 81		
Benches Nos. 1 to 8:			
Refill from floor line up 3552.42 x 8	28419 36		
Rebuild 4 recuperators 1107.27 x 4	4429 08		
		36,285 78	
			$36,515 42
Battery #3:			
5 new bridge pipes 5 x 304# equals 1520 x $.1215		184 68	
Benches 1 to 8 inclusive:			
Rebuild furnaces (see page 6) $472.27 x 8		3,778 16	
Refill $3,552.42 x 8		28,419 36	
Rebuild 4 recuperators 1107.24 x 4		4,429 08	
			36,811 28

Battery #4:		
Replace 4 Buckstays—12" channels 1890 x 4 equals 7560# @ $.1215	918 54	
Benches 1 to 4:		
Refill 4 benches 3552 42 x 4	14,209 68	
Rebuild 4 recuperators 1107 27 x 4	4,429 08	
		19,557 30
Battery #5:		
[fol. 3818] Rebuild 4 recuperators 1107 27 x 4		4,429 08
Battery #6:		
Benches Nos. 1 to 8:		
Refill 3552.42 x 8	$28,419 36	
Rebuild 4 recuperators 1107.27 x 4	4,429 08	
		32,848 44
Battery #7:		
Replace 1 Buckstay 2—12" Channels 1890# @ $.1215	$229 64	
Rebuild 4 recuperators 1107.27 x 4	4,429 08	
Refill Bench 3552.42 x 8	28,419 36	
		33,078 08

Inclined Retort House I. R.—Continued:

Battery #8: Benches 1 to 8:

New furnace	$472 27		
Iron work for furnace	673 51		
Refill Bench	3,552 42		
(See Page #6)	4,698 20 x 8	37,585 60	
Replace 6 Buckstays 1890# x 6 equals 11.340# @ $.1215		1,377 81	38,963 41

All Batteries: Repairs to front of furnace: New steel angles at furnace, Angles—4″ x 4″ x ½ x 10′ 6″ equals 134.4# x 128 equals 17,203 x $.1215 — 2,090 16

Steel Shields—4:

Replace plate—

5′ x 10′ x 3/16″—50 sq. ft. x 7.65# equals	382 50#		
2—1½″ x 1½″ x ¼ equals 2.34 x 20′	46 80#		
	429 3 # x 4 x $.1215		208 60

Brickwork under ash doors of furnace 2′ 0″ high x 5′ 6″ long x 9″ x 64 equals 528 cu. ft. x 16 equals 8448 F. B. @ [fol. 3819] $136.00 per M — 1,148 93

Miscellaneous Small Repairs: Remove Bench iron work, patching Retorts, demolishing old brickwork, enlarging base of oxide flues, removing old buckstays, leveling hydraulic mains—welding mouthpieces. 12 fasteners on bridge pipe covers #1 Battery, 1 fastener on bridge pipe cover Battery #3, 1 fastener on bridge pipe cover Battery #4, 1 cover for bridge pipe Battery #4, 1 fastener on bridge pipe cover Battery #5		$3,000 00	
			$208,650 70
8 Pocket Coal Bin including 16 link Belt Gates—8.	Replace		
16 plates 12′ 10″ x 19½″ x ¼″	3,392#		
32 plates 3′ 0″ x 1′ 11″ x ¼″	1,880		
32 plates 2′ 9″ x 1′ 11″ x ¼″	1,724		
32 plates 6′ 6″ x 1′ 0″ x ¼″	2,122		
32 plates 1′ 4″ x 6″ x ¼″	218		
14 plates 6′ 0″ x 2′ 10″ x 3/16″	1,820		
56 plates 3″ x 3′ 6″ x 5/16″	628		
28 plates 2′ 4″ x 5″ x 3/16″	210		
64 angles 2½″ x 2½″ x ¼″ x 2′ 6″	685		
32 angles 3″ x 3″ x ¼″ x 1′ 6″	245		
32 angles 3″ x 3″ x ¼″ x 1′ 3″	206		
		13,130#	
13,130# @ $.15 per #			1,969 50

Inclined Retort House I. R.—Continued:

Pipe Covering:				
3 ft. of 4" Std. Magnesia Pipe Covering @ $.35				1 05
Pipe Repairs, Small Piping:				
Replace 1—2½" Union	$1 29			
Replace 1—1¼" Union	62			
		$1 91		
Replace 1—1" Tee		3 09		
Repack 1—1" Valve	32			
Repack 1—1¼" Valve	32			
		64		
Replace 1—2" Gasket		76		
Replace 1—1¼" Ell		4 59		
			10 99	10 99
				$210,632 24

Inclined Retorts

One Bench

Material	Quantity	Unit	Cost	Labor unit	Labor	Total cost
Fire Clay	18,994 lbs.		696 08	30% Cost	208 82	904 90
Fire Clay	35,062 lbs.	0123	431 26	30% Cost	129 38	560 64
Milled Fire Clay	12,769 lbs.	006	76 61			76 61
Fire Brick	4,000 No.	63 00 M	252 00	73 00 M	292 00	544 00
Fire Brick	3,123 No.	63 00 M	196 75	73 00 M	227 98	427 73
Cinder Fill	10 8 C. Y.	1 20	12 96	2 00	21 60	34 56
Millboard	50 Sheets	144 ea.	7 20	25 ea.	12 50	19 70
Silica	71,018 lbs.		1,232 76	30% Cost	369 83	1,602 59
Sand	3 C. Y.	2 85	8 55			8 55
Cement	30 Bags	70	21 00			21 00
Hauling	198,624 lbs.	2 00 Ton				198 62
Iron Work	Disassembling and Reinstalling					201 38
						4,597 28

Ratio for quantity of Milled Fire Clay—1: 13.7 of total weight of Fire Clay, Fire Brick and Silica, from data furnished by Gas Company.

Iron Work—Cost for disassembling and re-installing, Price derived from T. M. G. Estimate for Horizontal Retorts of $179.00, 179.00 divided by 8 x 9 equals $201.38.

2563

[fol. 3821]

The Astoria Light, Heat & Power Co.

Inclined Retorts

To Refill One Bench From Floor Line Up

	Quantity	Total cost erected
Fire Clay	35,062 lbs.	560 64
Fire Brick	3,123 No.	424 73
Cinder Fill	10 8 C. Y.	34 56
Milled Fire Clay	4,155 lbs.	24 93
		1,044 86
		4,597 28
Minus		1,044 86
Bench from Floor Line Up		$3,552 42

To Rebuild Furance

	Quantity	Cost	Labor	Total cost
Fire Clay	8,406 lbs.	111 10	33 33	144 43
Fire Brick	2,150 No.	135 45	156 95	292 40
Milled Fire Clay	1,712 lbs.	10 27		10 27
Hauling	25,168 lbs.			25 17
				$472 27

Steam Distributors

Copper Piping, 2 pcs. @ $5.00	$10 00	T. M. G.
Furnace Iron Work: 5,461 lbs. @ .1215	663 51	B. H. Co. Estimate.

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[fol. 3822] The Astoria Light, Heat & Power Co.

Inclined Retort

Rebuild Recuperators for One Bench

Material		Unit	Cost	Labor unit	Labor	Total cost
Fireclay	49,225 lbs.		$794 53	30% cost	$238 36	$1,035 89
Milled Fireclay	3,593 lbs.	006	21 56			21 56
Hauling	52,818	2 00 Ton				52 82
						$1,107 27

2563

Tar Extratcor House W. T. E.:

7½" x 8½" x 6" Worthington Duplex Pump No. 301488: Overhaul valves: 8 hours machinist & helper		11 68
4½" x 4" x 6" Davidson Simplex Pump Repack:		
Material	1 26	
3 hours Machinist & helper	4 38	
		5 64
12' 0" dia. x 16' 5¼"—3 Chamber Rotary Cyanogen Washer including 7" x 9" N. Y. Safety Vertical Engine Drive—3 Overhaul & repack 1 Engine:		
Material	1 26	
8 hours Machinist & helper	11 68	
		12 94
12' 0" dia. x 17' 7¼"—6 Chamber—Rotary Napthalene Washer including 7" x 9" N. Y. Safety Vertical Engine Drive—3:		
Works No. 2:		
Replace worm, Worm 7" dia.	19 40	
8 hours Machinist & helper	11 68	
	31 08	
Works No. 3: Overhaul Engine 8 hours Machinist & helper	11 68	
		42 76
Pipe Repairs, Small Piping: Replace 1—2" gasket		76
		$73 78

[fol. 3824] West Condenser House W. C.:

10" dia. x 21' 5½" long—12 section Ammonia Washer including 9" x 9" Greenfield Vertical Engine Drive Make new red lead joints 48 hours Machinist & Helper..... $70.08

[fol. 3825] Pipe Repairs, Small Piping:

Repack 1—3" valve		$.32	
Replace 1—1½" gasket	$.70		
Replace 1—2" gasket	.76		
		1.46	
Replace 1—½" valves		2.70	
			$4.48
			$74.56

[fol. 3826] West Purifier W. P.:

4½" x 5" x 5" Warren Steam Pump—1:

Overhaul 8 hours, Machinist & Helper	$11.68	
New valve chest casting	10.00	
		$21.68
Pipe Covering: 12 ft. of 1¼" Std. Magnesia Pipe Covering @ $.20	2.40	
		$24.08

[fol. 3827] Horizontal Retort House H. R.:

Battery #1:

Replace 2 castings on back of Hydraulic Mains, Size 60″ x 12″ x 1″ 720 cu. in. x 26 lbs. per cu in. x $.1215 per lb.		$45.48	
Replace 4 Buckstays 15″ channels 30′ 0″ plus 27′ 0″ equals 57′ 0″ 57′ 0″ x 33 lbs. per ft. x $.1215 per lb. x 4		914.16	
Benches 1 to 5:			
Rebuild from basement up to including arches over retorts 4375.84 x 5 equals	21,879.20		
Rebuild furnace 637.95 x 5	3,189.75		
Removing and replacing bench iron work 179.00 x 5	895.00		
		25,963.95	
Benches 6 to 10:			
Refill benches 3,357.67 x 5 equals	16,788.35		
Rebuild recuperators 551.72 x 5 equals	2,758.60		
		19,546.95	
			46,470.54

Battery #2:

Replace 3 Buckstays 1,881 lbs @ $.1215 per lb. x 3		685.62	
New Stand Pipe 7″ dia. x 12′ 8″ long 12.66 x 42.08 lbs per ft. @ $.1215 per lb.		64.63	
Repair end walls Tile 13″ x 9″ x 4½″ 1.08 x .75 x .38 equals .32 cu. ft. 4 x 4 x 1.92 equals 30.72 divided by .32 equals 96 tiles 96 tiles @ $.23 per tile	22.08		
Labor 96 @ $.10	9.60		
		31.68	

4 x 3 x 1.92 equals 23.04 divided by .32 equals 72 tiles 72 tiles @ $.23 per tile 16.56 Labor 72 @ $.10		7.20	23.76	
			55 44	
[fol. 3828] Benches 1 to 5:				
Refill from floor line up $3,357.57 x 5		16,788.35		
Bench iron work 179.00 x 5		895.00		
			17,683.35	
Benches 6 to 10:				
Refill from floor line up $3,357.57 x 5		16,788.35		
Rebuild recuperators $551.72 x 5		2,758.60		
			19,546.95	
				$38,035.99
Battery No. 3:				
Replace 6 Buckstays 1881# x 6 equals 11,286# 11286# @ $.1215 per lb.			1,371.25	
Repair end walls 5 x 5 x 1.92 equals	96	cu. ft.		
3 x 3 x 1.92 equals	17.3	cu. ft.		
	113.3	cu. ft.		
113.3/.32 equals 354 tiles Tiles 354 @ $.23 per tile		$81.42		
Labor @ $.10 per tile		35.40		
			116.82	
				1,488.07

Horizontal Retort House H. R.—Continued

Battery No. 4:

Replace 2 castings on back of Hydraulic Main 60" x 12" x 1" equals 720 cu. in. 720 cu. in. x $.26# per cu. in. x 2374.40#—374.40# @ $.1215 per #		45.48
Repair end walls (2 x 3) plus (4 x 2) equals 14 14 x 1.92 equals 26.88 26.88/.32 equals 84 tiles Tiles 84 @ $.23 per tile	$19.32	
Labor	8.40	
		27.72
Benches 1 to 5 Refill from floor line up (See page —) 3357.67 x 5	$16,788.35	
Bench iron work 179.00 x 5	895.00	
		17,683.35
Benches 6 to 10 Rebuild from basement up including arches over retorts Rebuild 1 furnace 637.95 x 5	3,189.75	
Rebuild 1 bench 4375.84 x 5	21,879.20	
Bench iron work 179 x 5	895.00	
		25,963.95

[fol. 3829] Replace 12 Buckstays.

57′ 0″ x 40# equals 2280#, 2280# x 12 equals 27360#, 27360# @ $.1215 per #		$3,324 24	
Rebuild 5 recuperators 551.72x5		2,758 60	
			49,803 34
Battery No. 5:			
Replace 2 furnace covers.			
21″ dia. C. I. x 1″ thick, 21x21x.7854x1 equals 346 cu. in., 346 cu. in. x 26# per cu. in. @ $.1215 per lb.		10 93	
Repair end walls.			
3x3x1.92x2 equals	34 56		
3x2x1.92x2 equals	23 04		
		57 60	
57.60/.32 equals 180 tiles, 180 @ $.23 per tile	$41 40		
Labor	18 00		
		59 40	
			$70 33
Battery No. 6:			
New Stand Pipe.			
12′ 8″x42.08# per ft. equals 532#, 532# @ $.1215 per #		64 63	
Replace 2 castings on back of Hydraulic Main 60″x12″x1″		45 48	
Benches 1 to 10.			
Refill benches 3357.67x10		33,576 70	
Rebuild 5 recuperators 551.72x5		2,758 60	
			36,445 41

All Batteries:			
Brickwork under ash doors of furnance 20″x6″x9″x6′ 0″ 1.67x6.5x75 x60 equals 488.25 cu. ft., 488.25 cu. ft. x16 equals 7812 firebrick, 7812 firebrick @ $136 per M			1,062 43
[fol. 3830] Replacing steel bands on brickstack		$1,483 59	
Miscellaneous Small Repairs Demolishing old brickwork, patching retorts, removing old buckstays, leveling hydraulic mains, straightening chutes, removing bench iron work, welding mouthpieces. Fasteners on bridge pipe covers, Batteries Nos. 1, 2 & 3, and replace 2 covers on bridge pipes Battery No. 6		3,000 00	
			$177,859 70
Discharging Machines—6:			
Replace 1-C. I. Worm, Drive Housing.			
Material	188 00		
8 hours Machinist & helper	11 68		
		199 68	
Replace 1 cast steel Worm Body.			
Material	65 00		
16 hours Machinist & helper	23 36		
		88 36	
Replace 1—complete Worm Reduction Drive with coupling.			
Material	156 00		
24 hours Machinist & helper	35 04		
		191 04	

Replace.

100 Cast Steel links	1,840 00		
6 Cast Steel Relief links	110 00		
6 Cast Steel End links	84 00		
6 Cast Steel Relief teeth	42 00		
48 hours Machinist & helper	70 08		
		2,146 08	
			2,625 16

Debrouwer Charging Machines—4.

Replace 6-13″ Endless Belts each 25′9″ long, 5x4x1/4″ top cover, 42 ozs. duck.

Material	326 80	
64 hours Machinist & helper	93 44	
		420 24

Pipe Covering:

18 ft. Std. Magnesia Pipe Covering		3 24

Pipe Repairs, Small Piping:

Replace 3 Unions, Replace 1 Tee, Replace 2 Gaskets	10 21	
		$180,918 55

[fol. 3831] The Astoria Light, Heat & Power Co.

Horizontal Retorts

Material	Quantity	Unit	Cost	Labor unit	Labor	Total cost
Fire Clay	5,789 lbs.	.....	79 47	30% Cost	23 84	103 31
Fire Clay	44,331 lbs.	0123	545 27	30% Cost	163 58	708 85
Silica	83,118 lbs.	.....	1,561 86	30% Cost	468 56	2,030 52
Fire Brick	370 No.	63 00 M	369 81	73 00 M	428 51	798 32
Fire Brick	5,500 No.					
Millboard	200 Sheets	144	28 80	.....	50 00	78 80
Cement	30 Bags	70	21 00	.....	.....	21 00
Sand	17,470 lbs.	006	104 82	.....	.....	104 82
Cinder Fill	8 7 C. Y.	1 20	10 44	2 00	17 40	27 84
Hollow Tile	378 No.	16	60 48	10	37 80	98 28
Hauling	216,650 lbs.	2 00 Ton	.....	.....	.....	216 65
Iron Work—Disassembling and Reinstalling						179 00
						4,375 84

Ratio for quantity of Milled Fire Clay—1:9.83 of total weight of Fire Clay, Fire Brick and Silica; from data furnished by Gas Company.

Iron Work--Dissassembling and Re-Installing

Machine Shop Labor	16 00
Weld	3 00
Cartage	24 00
Take Down	40 00
Erection	80 00
Stand Pipe (Renewal)	16 00
	179 00—T. M. G. Estimate.

[3832]

The Astoria Light, Heat & Power Co.

Horizontal Retorts

To Refill One Bench from Floor Line Up

	Quantity	Total cost erected
Fire Clay	44,331 lbs.	708 85
Fire Brick	370 No.	50 32
Cinder Fill	8 7 C. Y.	27 84
Hollow Tile	378 No.	98 28
Milled Fire Clay	4,509 lbs.	27 05
Sand	3 C. Y.	8 55
Cement	30 Bags	21 00
Hauling		76 28
		1,018 17
		4,375 84

Minus	1,018.17
To Refill Bench from Floor Line Up	$3,357.67

To Rebuild Furnace	Quantity	Cost	Labor	Total cost
Fire Brick	4,000 No.	252.00	290.00	544.00
Fire Clay	2,448 lbs.	32.17	9.65	41.82
Milled Fire Clay	3,097 lbs.	18.58	.....	18.58
Hauling	33,545 lbs.	.....	.....	33.55
				$637.95

[fol. 3832a]

The Astoria Light, Heat & Power Co.

Horizontal Retorts

Rebuild Recuperators for One Bench

Material		Unit	Cost	Labor unit	Labor	Total cost
Fireclay	26,175 lbs.	.....	$389.92	30% cost	$116.98	$506.90
Milled Fireclay	2,663 lbs.	.006	15.98	....	.....	15.98
Hauling	28,838 lbs.	2.00 ton	.....	....	.....	28.84
						$551.72

Tar Extractor House E. T. E.:

4" x 3" x 7" Cameron Simplex Pump:

Repack.

Material	$1.80		
3 hours Machinist & Helper	4.38		
		$6.18	

Replace Piston Rod.

Rod	10.00		
12 hours Machinist & Helper	17.52		
		27.52	
			$33.70

12' 0" dia x 17' 7¼"—6 chamber Rotary Naphthalene Washer including 7" x 9" N. Y. Safety Vertical Engine Driver—3:

Replace 1 worm & worm gear.

Worm—7" dia.		19.40	
Gear 48" dia.		112.20	
16 hours Machinist & Helper		23.36	
			154.96

12' dia. x 16' 5¼"—3 chamber Rotary Cyanogen Washer including 7" x 9" N. Y. Safety Vertical Engine Drive—3:

Works No. 2:

Overhaul Engine—8 hours Machinist & Helper		11.68	

Works No. 3:

Replace 1 worm & worm gear.

Worm 7" dia.		19.40	
Gear 48" dia.		112.20	
16 hours Machinist & Helper		23.36	
			154.96
			166.64

[fol. 3834] East Tar Extractors, E. T. E.:

Pipe Repairs:

Small Piping:

Repack 4—2" valves	$1.28		
Repack 2—4" valves	.64		
Repack 1—10" valves	1.00		
		$2.92	
Replace 1—3" valve		23.43	
Replace 1—8" gasket		1.03	
Replace 3 ft. of 1¼" pipe		2.08	
			$29.46
Large Piping Caulk 5 rivets			1.25
			$30.71
			$386.01

[fol. 3835] Boiler House "B":

375 H. P. B. & W. Boilers—180 4" dia. Tubes, 18' 0" long—4:

Point up Brickwork, 40 @ $0.15		$6 00	
Weld 5 door frames, 5 cracks @ $3.00 each		15 00	
			$21 00

Link Belt Co. double strand chain and bucket elevator and roller flight conveyor:

Elevator:

Overhaul, 56 hours, machinist & helper		81 76	

Conveyor:

Overhaul, 48 hours machinist & helper		70 08	
Replace 1 pinion:			
Pinion 34" dia.	$55 80		
8 hrs. machinist & helper	11 68		
		67 48	
Replace 9 cross shafts:			
Material	10 00		
9 hrs. machinist & helper	13 14		
		23 14	
			242 46

3579

Pipe covering:				
8 ft. of ¾″ Std. Magnesia Pipe Covering @ $0.17			1.36	
11 ft. of 3″ Std. Magnesia Pipe Covering @ $0.27			2.97	
4 ft. of 8″ Std. Magnesia Pipe Covering @ $0.59			2.36	
				6.69
Pipe Repairs, Small Piping:				
Repack 1 ¾″ valve	$0.32			
Repack 2 1½″ valves	.64			
Repack 2 2″ valves	.64			
Repack 1 3″ valve	.32			
Repack 1 10″ valve	1.00			
Repack 1 12″ valve	2.00			
		4.92		
Replace 1 2″ gasket	.76			
Replace 2 3″ gaskets	1.60			
Replace 2 12″ gaskets	2.56			
		4.92		
Replace 1 ¾″ valve		3.30		
			13.14	
				13.14
Brick Stack, 8′ 0″ dia. on top, 150′ 0″ high:				
Repair brickwork & bands				2,614.50
				$2,897.79

[fol. 3836] Exhauster House E:

57 cu. ft. Connersville Exhauster direct connected to 11" x 21" Buckeye Horizontal Engine—5:

Works No. 1—Overhaul Eccentric & Valve Gear & Repack:				
Material		$1.89		
16 hours machinist & helper		23.36		
			$25.25	
Works No. 2—Overhaul:				
28 hours machinist and helper		40.88		
Rebabbit 7 bearings:				
84# @ $0.50 per #	42.00			
56 hours machinist and helper	81.76			
		123.76		
			164.64	
Works No. 3—Repack:				
Material		1.89		
4 hours machinist and helper		5.84		
			7.73	
Works Nos. 4 & 5—Overhaul Valve Rigging:				
12 hours machinist & helper			17.52	
				$215.14

Ingersoll-Rand 2 Stage Air Compressor driven by Cross Compound Steam Engine—Repack 5 Valve Stems:			
Material		1.00	
5 hours machinist & helper		7.30	
			8.30
Pipe Repairs:			
Repack 4 2″ valves	1.28		
Replace 1 6″ gasket	$0.96		
Replace 1 8″ gasket	1.03		
	1.99		
		3.27	
			3.27
			$226.71
[fol. 3837] Meter House "M":			
4½″ x 2¾″ x 4″ Blake Duplex Water Pump No. B-192961, W-243104:			
Replace 2 Bronze Piston Rods:			
Material	$16.00		
16 hours Machinist & Helper	23.36		
		$39.36	

Repack Piston Rod, Overhaul Valve Motion & Valves on Water End.			
Material	1 26		
16 hours Machinist & Helper	23 36		
		24 62	
			$63 98
Pipe Repairs, Small Piping:			
Repack 1 1¼" valve	$ 32		
Repack 1 2" valve	32		
	64		64
16' 0" dia. Station Meter with Hinman Drum—4—Repairs & Examination:			
Time Repairing. 393½ hrs. @$1 25 per hour		491 88	
Expense		174 07	
Solder 50# @ $ 32 per #		16 00	
Tin Plate 11# @ $.24 per #		2 64	
Sundries		6 28	
			690 87
			$755 49

[fol. 3838] "C" Generator House (W. G. G.):

Williamson Improved Generators, Complete—12. Works Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 & 12.

Works No. 2: New Purge Stack Flare (4.42 x 3.14 x 6.17) equals 86 sq. ft. 86 sq. ft. x 7.65# per sq. ft. equals 658#. 658# @ .1061 per lb.		$69.81
Works No. 3: New Purge Stack 36" dia. x 42' 0" high 86 sq. ft. plus (3 x 3.14 x 36.0) equals 425 sq. ft. 425 sq. ft. x 7.65# per sq. ft. equals 3251 lbs. 3251# @ $.1061 per lb.		344.93
Works No. 4:		
Replace steel plates 1' 0" x 1' 0" x ⅜" (1 x 1) equals 1 sq. ft. 1 sq. ft. x 153# per sq. ft. equals 15.3 lbs. 15.3# @ $.10	$ 1.53	
New Purge Stack Flare (See Calculation Works No. 2)	69.81	
		71.34
Works No. 11: New Purge Stack Flare. See Calculation Works No. 2		69.81
Works No. 12: Replace 1 Steel Plate 1' 0" x 1' 0" x ⅜" (1 x 1) equals 1 sq. ft. 1 sq. ft. x 15.3# per sq. ft. equals 15.3 lbs. 15.3# @ $.10 per lb.		1.53

Works Nos. 1 to 12 inclusive

Replace bottom rims on each set.

Material (12 x 3.14 x 6) equals 226 sq. ft. 226 sq. ft. x 17.85# per sq. ft. equals	4036 lbs.		
Laps and Rivets	712 lbs.		
	4748 lbs.		
4748# @ $.15 per lb. x 12		$8,546 40	
Labor for erection of rim, replacing nozzles, etc. 4 Boilermakers & 4 Helpers 12 days x 12		6,681 60	
Shoring		5,011 20	
Reline portion of shells replaced		25,680 00	
			45,919 20

[fol. 3839] Works Nos. 1 to 12, inclusive

Replace 6 C. I. Cleaning Door Frames, each set (26 plus 35 plus 26 plus 35) x 12 x 1.25 equals 1830 cu. in. 1830 cu. in. x 26# per cu. in. equals 476 lbs. 476# @ $ 09 per lb. x 6 x 12			3,084 48
Replace 4 Ash Door Frames on each set 4 (21 plus 31 plus 21 plus 31) x 1.25 equals 6240 cu. in. x .26# per cu. in. equals 1622 lbs. 1622# @ $ 09 per lb. x 12			1,751 76
Replace 16. C. I. Lintels. Material		$677 32	
Mason 1 day		10 00	
			687 32
			$52,000 18

4″ x 3″ x 7″ Cameron Pump—1 No. 37125			
4″ x 3″ x 7″ Cameron Pump—1. No. 37125 Replace Piston Rod			
Rod	5 00		
8 hours Machinist & Helper	11 68		
		16 68	
Repack			
Material	1 26		
4 hours Machinist & Helper	5 84		
		7 10	
			23 78
335 H. P. B. & W. Waste Heat Boilers. 182—4″ Tubes. 16′ 0″ long—6. Regrind 4 blow-off valves 4 hours Machinist & Helper	.....	.....	5 84
Size 7 Sturtevant Multivane Blower direct connected to 212 H. P.			
Terry Turbines—12			
Overhaul 1 Blower			
16 hours Machinist & Helper	.....	23 36	

Replace shaft on 1 Blower

Material	25.00		
32 hours Machinist & Helper	46.72		
		71.72	

Replace 1 Turbine Wheel

Material	275.00		
8 hours Machinist & Helper	11.68		
		286.68	

Replace 12 Blower Bearings

Material	510.00		
48 hours Machinist & Helper	70.08		
		580.08	
			961 84

[fol. 3840] Fuel Charging Cars (Style B)—17

Fuel Charging Cars (Style B)—17

Replace steel plate on 14 cars Size 5' 8" x 2' 0" x 3/16" (5.67 x 2.0) equals 11.34 sq. ft. 1134 sq. ft. x 3.8 lbs. per sq. ft. equals 43 lbs. 43 lbs. @ $.15 per lb. x 14 ..... $90 30

10" x 10½" x 18" Cameron Steam Pump—1

Overhaul

16 hours Machinist & Helper 23 36

[fol. 3841]

Pipe Covering:

1 ft. of 3/4" Std. Magnesia Pipe Covering @	$ 17	$ 17	
8 ft. of 1" Std. Magnesia Pipe Covering @	$ 18	1 44	
24 ft. of 1½" Std. Magnesia Pipe Covering @	$ 21	5 04	
28 ft. of 2" Std. Magnesia Pipe Covering @	$ 22	6 16	
9 ft. of 2½" Std. Magnesia Pipe Covering @	$ 25	2 25	
10 ft. of 6" Std. Magnesia Pipe Covering @	$ 45	4 50	
			$19 56

Pipe Repairs:

Small Piping:

Repack 1—1/2" valve	$ 32	
Repack 1—3/4" valve	32	
Repack 2—1" valves	64	
Repack 1—1¼" valve	32	
Repack 1—1½" valve	32	
Repack 2—2" valves	64	
Repack 1—2½" valve	32	
Repack 1—3" valve	32	
Repack 5—4" valves	1 60	
Repack 2—6" valves	2 00	
Repack 2—8" valves	2 00	
Repack 4—10" valves	4 00	
Repack 3—12" valves	6 00	
		$18 80

Replace 1—3/4″ plug	26			
Replace 2—2″ plugs	38			
		64		
Replace 1—5″ gasket	92			
Replace 2—6″ gaskets	1 92			
Replace 2—8″ gaskets	2 06			
Replace 2—12″ gaskets	2 56			
		7 46		
Replace 2—1/4″ petcocks		80		
Replace 1—3/4″ union	50			
Replace 1—1″ union	54			
		1 04		
Replace 2—1″ ells	3 05			
Replace 1—2″ ell	6 76			
		9 81		
Replace 1—10″ flange		5 80		
Replace 1—3/4″ valve		3 30		
			47 65	
Large Piping:				
Repair 26 bolt leaks		10 40		
Caulk 20 rivets		5 00		
			15 00	
				63 05
				$53,187 91

[fol. 3842] Salt Water Condensers C Unit W. G. C.:

42' 6" x 9 1/2" x 16' 3/4" C. I. Salt Water Condensers—
5 2008—3" dia. Tubes:

Clean & Paint (42.5 plus 9.79 plus 42.5 plus 9.79) x 16.06 equals 1680 sq. ft., 1680 sq. ft. @ $.039 per sq. ft. x 5		$327 60	
Replace 7' 0" of 1/4" double pipe rail 7 ft. @ $2.08 per ft.		14 56	
			$342 16

Pipe Repairs:

Small Piping:			
Repack 2—6" valves	$2 00		
Replace 1—6" gasket	96		
		2 96	
Large Piping:			
Repair 30 bolt leaks		12 00	
		14 96	

[fol. 3843] Relief Holder W. G. H. #1:

2 Lift Relief Holder #1, Capacity 1,007,000 cu. ft. 136' 7 15/16" dia. x 35 9" high: Paint 70,130 sq. ft. @ $.012 per sq. ft.	841 56

[fol. 3844] Tar Extractor House W. G. T. E.:

24" P. & A. Tar Extractors—6: Works No. 4, Replace Drum		$1,200 00
Pipe Repairs:		
Small Piping, Repack 1-2" valve	$ 32	
Large Piping, Repair 8 bolt leaks	3 20	
		3 52
		$1,203 52

[fol. 3845] Shaving Scrubbers W. G. S.:

12' 0" dia. x 25' 1½" high Scrubber, including platforms & supports—8: Weld C. I. Lugs on 16 Cleanout Doors 16 @ $3.00 each	$48 00
Pipe Repairs, Large Piping:	
Repair 25 bolt leaks	10 00
	$58 00

[fol. 3846] Purifier House W. G. P.:

Electric Traveling Cover Crane—1, Span 92' 1" including 2 cu. yd. Grab Socket:	
Replace 1 Steel Plate 3.5 x 2.5 x 5.1# per sq. ft. equals 44.63 lbs. 44.63 lbs. @ $.15 per lb	$6 69

[fol. 3847] Generator House (D. C.):

Water Gas Sets—12, including 12' 0" dia. generator 11' 0" dia. carburetter, 11' 0" superheater, wash box, etc. Works Nos. 1 to 12, inclusive:

Works No. 7: Weld 3 cracks in cleanout doors, 3 cracks @ $3.00 each	$9 00	
Works No. 8: Caulk 7 rivets on washbox, 1 hour Caulker & Helper	1 75	
Works No. 12: Weld 1 crack in cleanout door, 1 crack @ $3.00	3 00	
		$13 75

Sturtevant Gas Blower—Design 5, Size 9, direct connected to 185 H. P. Terry Turbine—6:

Rebabbit 2 blower bearings.		
Material 24# $.50 per lb	$12 00	
16 hrs. Machinist & Helper	23 36	
	35 36	
Replace 6 Bearings & 12 Oil Rings.		
Material	300 00	
24 hrs. Machinist & Helper	35 04	
	335 04	
		370 40

335 H. P. B. & W. Waste Heat Boilers, 182-4" Tubes, 16' 0" long—6 Works Nos. 5 & 6:

Remake joints on Boiler Valves.		
Material	5 00	
96 hrs. Boilermaker & Helper	139 20	
		144 20

Pipe Covering:

36 ft. of 6" Std. Magnesia Pipe Covering @ $ 45		16 20	
2 ft. of 8" Std. Magnesia Pipe Covering @ $ 59		1 18	
			17 38

[fol. 3848] Pipe Repairs:

Small Piping:

Repack 4-¾" valves	$1 28		
Repack 2-1" valves	64		
Repack 2-1¼" valves	64		
Repack 3-1½" valves	96		
Repack 7-2" valves	2 24		
Repack 2-4" valves	64		
Repack 2-8" valves	2 00		
		$8 40	
Replace 1-1½" tee		5 41	
Replace 1-¾" ell	2 36		
Replace 2-1½" ells	10 82		
		13 18	
Replace 1-4" gaskets	86		
Replace 2-5" gaskets	1 84		
Replace 1-6" gasket	96		
Replace 8-8" gaskets	8 24		
Replace 2-10" gaskets	2 32		
Replace 1-12" gasket	1 28		
		15 50	
			$42 49

Large Piping:

Repack 1-30″ valve	3 00	
		$45 49

[fol. 3849] Condensers D. G. C.:

42′ 6″ x 9′ 9½″ x 16′ ¾″ high C. I. Salt Water Condensers—6 2008—3″ dia. Tubes. Clean & Paint (42.5 plus 9.79 plus 42.5 plus 9.79) x 16.06 equals 1680 sq. ft. 1680 sq. ft. @ $.039 per sq. ft. x 6	$393.12

[fol. 3850] Relief Holder D. H.:

2 Lift Relief Holder No. 2 Capacity—1,007,000 cu. ft. 136′ 7 15/16″ dia. x 35′ 9″ high: Paint 70,130 sq. ft. @ $.012 per sq. ft.	$841.56

[fol. 3851] Purifiers D. P.:

45′ 0″ dia. Dry Seal Purifier Boxes. 13′ 4″ high—12:	
Repack portion of Seal 60 ft. @ $2.00 per ft.	$120.00
Pipe Repairs, Small Piping: Repack 1—¾″ valve	.32
	$120.32

[fol. 3852] Boiler House No. 2 D. B.:

10″ x 6″ x 12″ Blake Duplex Boiler Feed Pump—1:

Replace 2 valve stems.		
Material	6.00	
6 hours Machinist & helper	8.76	
		14.76

Repack.

Material	1.89		
4 hours Machinist & helper	5.84		
		7.73	
Overhaul.			
24 hours Machinist & helper		35.04	
			57.53

4″—4 Stage Jeanesville Double Suction Centrifugal Pump, direct connected to 97 H. P. Sturtevant Turbine:

Repack 2 glands on water turbine.

Material	1.89		
4 hours Machinist & helper	5.84		
		7.73	
Overhaul Pump.			
8 hours Machinist & helper		11.68	
			19.41

21′ 9½″ x 15′ 0″ x 12′ 9¾″ Steel Dust Hopper with 2 C. I. Chutes—2:
Boiler No. 1:

Replace 2 C. I. side plates.

(28 x 33 x 1) equals 824 cu. in.)
(114 x 2 x 1) equals 228 cu. in.) A
(37 x 41 x 1) equals 1517 cu. in.)
(156 x 2 x 1) equals 312 cu. in.) B

2981 cu. in.

2981 cu. in. x .26 lbs. per cu. in. equals 775 lbs.
775 lbs. @ $.90 per lb. 69.75

Boiler No. 2:

Replace 2 plates like above A.

Replace 1 plate like above B.

2(924 plus 228) equals 2304 cu. in.
(1517 plus 312) equals 1829 cu. in.

4133 cu. in.

4133 x .26 lbs. per cu. in. equals 1074 lbs.

1074 @ $.09 per lb. 96.66

Replace C. I. gate 2' 0" x 10' 9" x 1" thick (24 x 129 x 1) equals 3096 cu. in. 3096 x .26 lbs. per cu. in. equals 805 lbs. 805 lbs. @ $.09 per lb. 72.45

169.11

165—357

[fol. 3853] Boiler No. 3:

Replace 2 plates like above A.

Replace 2 plates like above B.

2304 plus 2(1829) equals 5962 cu. in.
5962 x .26 lbs. per cu. in. equals 1549 lbs. 1549 lbs. @ $.09 per lb. $139.41

Boiler No. 4:

Replace 2 plates like above A.

2304 cu. in. x .26 lbs. per sq. ft. equals 599 lbs. 599 lbs. @ $.09 per lb. 53.91

$432.18

Pipe Covering:

40 ft. of 1¼" Std. Magnesia Pipe Covering @ $.20 ..... 8.00
6 ft. of 4" Std. Magnesia Pipe Covering @ $.35 ..... 2.10

10.10

2597

Pipe Repairs, Small Piping.

Repack 1—1½" valve	$.32			
Repack 3—2" valves	.96			
Repack 1—2½" valve	.32			
Repack 2—4" valves	.64			
Repack 1—5" valve	.32			
Repack 4—10" valves	4.00			
Repack 2—12" valves	4.00			
		$10.56		
Replace 1—2½" gasket	.78			
Replace 2—10" gaskets	1.16			
		1.94		
		10.77		
Replace 1—2" valve		.80	24.07	24.07
Replace 1—2" union				
				$543.29

[fol. 3854] Boiler House W. G. B.:

4" x 3½" x 7" Cameron Tar Pump—1:

Replace valve chest gasket.

Material	.48		
2 hours Machinist & helper	2.92		
			$3.40

375 H. P. B. & W. Boiler, 180—4" Tubes 18' 0" long, including Oil burning installation—7:

Works Nos. 1 & 2:

Relay 6 bricks, 6 x $57.50 per M		.35	
Point up brickwork with high tempite.			
Material 200 # @ $ 055 per #	$11 00		
4 hours Mason & helper	8 50		
		19 50	
Works Nos. 3 & 4:			19 85
Relay 25 bricks 25 x $57.50 per M		1 42	
Point up brickwork with high tempite.			
Material 200 # @ $ 055 per #	11 00		
4 hours Mason & helper	8 50		
		19 50	
Works #5:			20 92
Point up brickwork with high tempite.			
Material 200 # @ $ 055 per #	11 00		
4 hours Mason & helper	8 50		
		19 50	

Relay 10 bricks:			
10 x $57.50 per M	.58		
		20 08	
Works #6:			
Overhaul water column.			
4 hours Machinist & helper		5 84	
Works #7:			
Repair furnace wall.			
2500 firebrick @ $167 78 per M		419 45	
			$486 14
[fol. 3855] 4" Jeanesville 2 stage double suction Centrifugal Pump, direct connected to 50 H. P. Kerr Turbine—1:			
Rebabbit 2 bearings.			
Material 24 # @ $ 50 per #	12 00		
16 hours Machinist & helper	23 36		
		$35 36	
Overhaul. 16 hours Machinist & helper		23 36	
			$58 72

Robins Conveying Belt Co. 18". Belt conveyor 132' 0" center to center with tripper, chute, 15 H. P. Motor and supports:			
Replace 12' 0" of 18" Rubberized Canvas Belt 12 0 @ $1.78 per ft.		21 36	
Replace 1 pinion 7" dia.			
Material	9 60		
6 hours Machinist & helper	8 76		
		18 36	
Replace 1 C. I. Guide Roller.			
Material	3 50		
1 hour Machinist & helper	1 46		
		4 96	
Overhaul. 24 hours Machinist & helper		35 04	
			79 72
Robins Conveying Belt Co. double strand chain & bucket elevator with casing and supports: Overhaul. 48 hours Machinist & helper			70 08
100" Sturtevant Forced Draft Blower direct connected to 7" x 7" Sturtevant vertical Steam Engine: Overhaul. 32 hours Machinist & helper			46 72

4 Compartment Coal Bin—2 63′ 0″ x 12′ 3″ x 13′ 9″:			
Replace 1 plate 2′ 0″ x 1′ 6″ x 3/16″ Replace 4 chutes.			
(2 x 1.5 x 7.65) equals	22.95#		
4 (1.33 x 3.14 x 7.2 x 7.65) equals	919.84#		
	942.79#		
942.79 plus 10% equals 1037.07 #.			
1037.07 # @ $.15 per #			155.56
[fol. 3856] 3″ x 2″ x 3″ Worthington Duplex Pump No. 191880:			
Replace C. I. Steam Chest Cover (4.5 x 6.0 x .75) equals 20.25 cu. in. 20.25 cu. in. x .26 # per cu. in. equals 5.27 lbs. 5.27 # @ $.09 per lb	$.47		
2 hours Machinist & Helper	2.92		
		$3.39	
Overhaul. 4 hours Machinist & Helper		5.84	9.23
Boiler Breeching: Paint (5 plus 5 plus 4.5 plus 4.5) x 120 equals 2280 sq. ft. 2280 sq. ft. @ $.022 per sq. ft.			50.16

4" Worthington 2 stage double suction Centrifugal Pump direct connected to 50 H. P. Kerr Turbine:				
Overhaul.				
Material:				
1 Rotor, complete		400 00		
3 Bronze Diffusion Rings @ $45. each		135 00		
48 hours Machinist & Helper		70 08		
				605 08
Brick Stack, 7' 0" dia. x 150' 0" high—2 Repair brickwork & bands				1,246 82
[fol. 3857] Pipe Covering:				
20 ft. of 1" Std. Magnesia Pipe Covering	@ $ 18	$3 60		
10 ft. of 1¼" Std. Magnesia Pipe Covering	@ $ 20	2 00		
16 ft. of 8" Std. Magnesia Pipe Covering	@ $ 59	9 44		
				15 04
Pipe Repairs, Small Piping:				
Repack 4—¾" valves	$1 28			
Repack 3—1" valves	96			
Repack 6—2" valves	1 92			
Repack 1—4" valve	32			
Repack 1—10" valve	4 00			
Repack 1—12" valve	2 00			
		10 48		
Replace 1—1" valve	4 40			
Replace 1—2½" valve	18 82			
		23 22		

Replace 2—2½" gaskets	1 56		
Replace 2—4" gaskets	1 72		
Replace 1—6" gasket	.96		
Replace 1—8" gasket	1 03		
Replace 5—10" gaskets	5 80		
		11 07	
Replace 1—¼" ell	1 81		
Replace 1—¾" ell	2 36		
Replace 2—1" ells	6 10		
Replace 1—1½" ell	5 41		
		15 68	
Replace 3—1" unions	.....	1 62	
			62 07

[fol. 3858] Exhauster House W. G. E.:

92.55 Cu. Ft. per Rev. Capacity Connersville Exhauster direct connected to 14" x 24" Buckeye Horizontal Engines—4:

Works No. 1:

Reset valves, overhaul piston rings & re-level engines, 56 hours Machinist & Helper	.....	81 76	

Works No. 2:

Overhaul valve gear, 16 hours Machinist & Helper	$23 36		

Rebabbitt 2 rocker arm bearings:			
24 lbs. @ $.50 per lb.	$12 00		
16 hrs. Mach. & Helper	23 36		
		35 36	
			58 72
Works Nos. 3 & 4:			
2 Crosshead boxes		$94 60	
2 Crosshead pins		53 00	
2 Wedges for crosshead box		22 00	
2 Wedges for Crank-pin boxes		26 40	
2 Crank-pin boxes		105 60	
4 Main valve connection boxes		61 60	
2 Main eccentric rod boxes		31 00	
2 Cut-off eccentric rod boxes		20 00	
2 Bottom slides for crossheads		132 00	
2 Bushings for cut-off valve connection		4 50	
2 Clamp-wrists for main valve stem		50 60	
2 Cut-off valve stems complete		77 00	
96 hours Machinist & Helper		140 16	
			818 46
			$958 94

2606

Size 5 Wilbraham Green Rotary Blower direct connected to 8" x 8" Troy Vertical Engine:			
On Engine:			
Adjust crank-pin & crosshead pin boxes, 8 hours Machinist & Helper			11 68
[fol. 3859] 92.66 cu. ft. Rev. Capacity Connersville Exhauster direct connected to 14½" x 24" Fleming Horizontal Engine:			
Overhaul eccentric strap and valve rod slide, 8 hours machinist & Helper		11 68	
Repack main gland & valve gland:			
Material	1 26		
3 hours Machinist & Helper	4 38		
		5 64	
			17 32
92.66 cu. ft. Rev. Capacity Connersville Exhauster direct connected to 15¼" x 21" Buckeye Vertical Engine Works No. 8:			
Repack main gland & valve gland:			
Material	1 26		
3 hours Machinist & Helper	4 38		
		5 64	

Overhaul:

1 Crosshead box	47 30		
1 Crosshead pin	26 50		
1 Wedge for crosshead box	11 00		
1 Wedge for crank-pin box	13 20		
1 Crank-pin box	52 80		
2 Main valve connection boxes	30 80		
1 Main eccentric rod box	15 50		
1 Cut-off eccentric rod box	10 00		
1 Clamp-wrist for main valve stem	25 30		
1 Cut-off valve stem complete	38 50		
24 hours Machinist & Helper	35 04		
		305 94	
			$311 58

[fol. 3860] Pipe Repairs:

Small Piping:

Repack 2—1"valves	$ 64		
Repack 3—1½" valves	96		
Repack 3—4" valves	96		
Repack 1—5" valves	32		
		$2 88	
Replace 2—1" gaskets	1 44		
Replace 2—5" gaskets	1 84		
Replace 3—10" gaskets	3 48		
		6 76	

2607

Replace 1—1″ tee	....	3.09		
Replace 1—6″ flange	3.44			
Replace 1—12″ flange	7.47			
		10.91		
Replace 2—¼″ pet cocks	....	.80		
			$24.44	
Large Piping:				
Replace 1—10″ gasket		1.16		
Repair 10—bolt leaks		4.00		
Caulk 12 rivets		2.90		
			8.06	
				32.50
				$1,332.02

[fol. 3861] Storage Holders:

6″ x 5¾″ x 6″ Worthington Duplex Pump:

Replace 1 bolt pin & cross shaft.

Material	$3.00		
5 hours Machinist & Helper	7.30		
		$10.30	
Overhaul. 8 hours Machinist & Helper		11.68	
			$21.98

5 Lift Storage Holder No. 1 in Masonry Tank 300″ 0′ dia. x 48′ 6″ deep. Capacity—15,000,000 cu. ft.—1: Paint 342,994 sq. ft. @ $.012 per sq. ft.			4,115.93
5 Lift Storage Holder No. 2 in Masonry Tank—300′ 0″ dia. x 48′ 6″ deep. Capacity—15,000,000 cu. ft.—1:			
Paint 342,994 sq. ft. @ $.012 per sq. ft.		4,115.93	
Replace 2 rollers, 2 @ $20.00 each		30.00	
			4,155.93
			$8,293.84
[fol. 3862] Pulp House W. G. P. H.:			
6″ x 4″ x 6″ Worthington Duplex Pump with Receiver—1, No. 665,774: Replace 2 bronze piston rods.			
2 Rods @ $8.00 each	$16.00		
8 hours Machinist & Helper	11.68		
		$27.68	
Overhaul valve gear. 8 hours Machinist & Helper		11.68	
Replace 2 bolts for valve gear.			
2 bolts @ $1.00 each	2.00		
2 hours Machinist & Helper	2.92		
		4.92	
			$44.28

7½" x 8½" x 6" Worthington Duplex Pump—1:			
Replace 2 steel piston rods.			
2 rods @ $10.00 each	20 00		
12 hours Machinist & Helper	17 52		
		37 52	
Overhaul valve gear. 8 hours Machinist & Helper		11 68	
Replace 2 bolts for valve gear.			
2 bolts @ $1.00 each	2 00		
2 hours Machinist & Helper	2 92		
		4 92	
			54 12
7" x 6" x 13" Cameron Pump—1, No. 36029:			
Repack piston rod:			
Material		1 26	
2 hours Machinist & Helper		2 92	
			4 18
12" x 12" x 14" Davidson Simplex Pump—1, No. 20710:			
Replace bronze piston rod.			
Rod	50 00		
16 hours Machinist & Helper	23 36		
		73 36	

Replace 2 bolts.

2 bolts @ $1.00 each		2.00	
2 hours Machinist & Helper		2.92	
			4.92
Overhaul. 16 hours Machinist & Helper			23.36
			101.64

7½" x 8½" x 6" Worthington Duplex Jumps—3, No. 640,690:
Replace 2 bronze piston rods.

2 Rods @ $20.00 each	$40.00		
12 hrs. Mach. & Helper	17.52		
		57.52	
Repack.			
Material	3.78		
6 hrs. Mach & Helper	8.76		
		12.54	
			70.06

[fol. 3863] No. 560,408:

Replace 2 steel piston rods.

2 Rods @ $10.00 each	$20.00		
12 hrs. Mach. & Helper	17.52		
		$37.52	

Replace 2 cross-shafts.			
2 shafts @ $2.00 each	4.00		
8 hrs. Mach. & Helper	11.68		
		15.68	
			$53.20
No. Unknown:			
Replace 2 steel piston rods:			
2 Rods @ $10.00 each	20.00		
12 hrs. Mach. & Helper	17.52		
		37.52	
Replace 1 pin.			
Pin	1.00		
1 hr. Mach. & Helper	1.46		
		2.46	
Replace 1 link.			
Link	2.00		
2 hrs. Mach. & Helper	2.92		
		4.92	
			44.90
Overhaul 3 pumps.			
18 Suction Valve Springs @ $.40		7.20	
18 Discharge Valve Springs @ $.40		7.20	
24 Brass Studs @ $1.05		25.20	

166—357

24 Brass Seats @ $3.15	75 60		
8 Brass Liners @ $11.20	89 60		
1 Brass Liner @ $13.55	13 55		
	218 35		
Less 20%	43 67		
	174 68		
64 hrs. Mach. & Helper	93 44		
		268 12	
			$436 28
6″ x 4″ x 6″ Blake Duplex Steam Pump with Receiver—1, No. B-192,369, W-415,603:			
Overhaul. 8 hours Machinist & Helper			11 68
2-4½″ x 2¾″ x 4″ Blake Duplex Pumps with Receiver—1, No. B-192,021, No. W-415,940:			
Overhaul. 8 hours Machinist & Helper			11 68
2-4½″ x 2¾″ x 4″ Blake Duplex Pumps with Receiver—1, No. B-192,020, No. W-415,939:			
Overhaul. 8 hours Machinist & Helper			11 68
[fol. 3864] 16″ x 18″ x 18″ Davidson Simplex Pump—1, No. 14796:			
Overhaul valve and link motion, 4 hours Machinist & Helper			$5 84

2613

6″ x 10″ x 5¼″ x 10″ Compound Duplex Blake Pumps—3, Nos. 183,725, 183,623, 183,620:

Repack and overhaul pumps.

Material		$11.34	
36 hours Machinist & Helper		52.56	
			63.90

Pipe Repairs, Small Piping:

Repack 1—1″ valve	$.32			
Repack 3—1½″ valves	.96			
Repack 3—2″ valves	.96			
Repack 1—3″ valve	.32			
Repack 2—4″ valves	.64			
		$3.20		
Replace 1—8″ gasket		1.03		
Replace 1—¾″ valve		3.30		
			7.53	
				$7.53
				$752.81

[fol. 3865] Tar Pump House P. H.:

14″ x 14″ x 20″ Cameron Simplex Pump—1, No. 3343:

Overhaul. 16 hours Machinist & Helper	$23.36

12″ x 14″ x 18″ Blake Duplex Pump:

Overhaul link & valve stem. 16 hours Machinist & Helper		$23.36	
Replace 4 pins.			
4 pins @ $1.00 each	$4.00		
4 hours Machinist & Helper	5.84		
		9.84	
			33.20

10″ x 16″ x 12″ Knowles Duplex Air Compressor, No. 57758—8:

Overhaul. 44 hours Machinist & Helper		64.22	
Rebabbitt 2 bearings.			
Material 24 lbs. @ $.50 per lb.	12.00		
16 hours Mach. & Helper	23.36		
		35.36	
Replace 2 piston rods.			
Rods @ $25.00 each	50.00		
16 hours Mach. & Helper	23.36		
		73.36	
Replace valve stems & air glands and piston rings in steam cylinder.			
Material	25.00		
16 hours Machinist & Helper	23.36		
		48.36	
			221.30

6″ x 7½″ x 6″ Worthington Simplex Pumps—2 Nos. 18521 & Unknown:

Overhaul valve link motion 2 pumps. 8 hours Mach. & Helper	11.68	
4′ 0″ dia. x 7′ 9″ long Steel Air Pressure Tank—1 Paint (4.0 x 3.14 x 7.75) plus 2(2 x 2 x 3.14) equals 122.46 sq. ft. 122.46 sq. ft. @ $.024 per sq. ft.	2.94	
		292.48

[fol. 3866] Pump House N. S. P. H.:

16″ x 12″ x 18″ Blake Duplex Pumps—2 No. 199340:

Overhaul. 16 hours Machinist & Helper		23.36

[fol. 3867] Electric Power Station:

Wheeler Admiralty 2 pass Surface Condenser, 1500—¾″ #16 B. W. Co. Brass tubes 8′ 0″ long mounted over 12 x 16 x 16 x 4 x 16 Combined Air & Circulating Pump with Tail Pump attached—2:

Replace Water End on Pumps.

Material	$1,800.00	
32 hours Machinist & Helper	46.72	
		$1,846.72

750 K. W.—A. C. Generator direct connected to 23″ x 46″ x 48″ Allis-Chalmers Cross Compound Engine—2:

Unit Nos. 1 & 2: Overhaul Main Bearings and Valve Mechanism. 192 hours Machinist & Helper		280.32

10″ x 6″ x 12″ Blake Horizontal Duplex Pumps—2:
No. 152690-X-1:

Replace 4 pins, 2 links & 1 crossshaft.

4 Pins @ $1.00 each	$4.00		
2 Links @ $2.00 each	4.00		
1 Cross-shaft	2.00		
12 hours Machinist & Helper	17.52		
		27.52	
No. 152692-X-3:			
Overhaul: 8 hours Machinist & Helper		11.68	
			39.20

604 H. P. B. & W. Boiler 296—4″ Tubes, 18′ 0″ long—4:

Weld 4 cracks in 4 door frames. 4 cracks @ $3.00 per crack	12.00	
Regrind 1 Safety Valve. 1 hour Machinst & Helper	1.46	
		13.46

Reynolds Vertical Air Pump & Jet Condenser with 14″ x 12″ Steam & 32″ x 12″ Water Cylinder:

Overhaul. 16 hours Machinist & Helper	23.36

[fol. 3868] Electric Power House E-S:

Pipe Repairs, Small Piping:

Replace 1—¾" union		$.50		
Replace 1—2" gasket	$.76			
Replace 2—6" gasket	1.92			
Replace 1—8" gasket	1.03			
Replace 5—10" gasket	5.80			
		9.51		
Replace 2—2" flanges		4.32		
Repack 2—¾" valves	.64			
Repack 1—2" valves	.32			
Repack 1—3" valves	.32			
Repack 2—10" valves	2.00			
		3.28		
			$17.61	
				17 61
				$2,220.67

[fol. 3869] Ammonium Sulphate Building:

5" x 5" Wachs Side Crank Engine—1:

Overhaul. 12 hours Machinist & Helper			$17.52

2" x 2" Dean Vertical Triplex Pumps—2:

Replace 1 Piston & Connecting Rod.

Material	$20.00		
8 hours Machinist & Helper	11.68		
		$31.68	

Rebabbit 4 bearings.

Material 24# @ $.50 per lb.	12.00	
16 hours Machinist & Helper	23.36	
	35.36	
Overhaul. 24 hours Machinist & Helper	35.04	
		102.08

No. 3 Cameron Double Suction Volute Pump direct connected to 75 H. P. Sturtevant Turbine. Overhaul Turbine. 12 hours Machinist & Helper 17.52

40" Fletcher-Cantilever type Suspended Centrifugal—2:

Cover 40" Basket, repair shaft including bronze top ring, welded steel bottom band and top band, 3 intermediate bands, reassembling basket, using present copper drum, copper tubing and valve collar 756.00

C. I. lead lined Drain Board, including supports, chutes and draw pot:

Replace 1 C. I. Drain Board lined with 20 lbs. chemical lead.

Material	1,600.00	
48 hours Rigger and Helper	63.36	
		1,663.36

Pipe Repairs, Small Piping.

Repack 2—1½" valves	$.64			
Repack 1—2" valve	.32			
		.96		
Replace 1—10" gasket		1.16		
			2.12	
				2.12
				$2,558.60

[fol. 3870] Cyanogen Plant X. C. F.:

5" x 2½" x 6" Davidson Simplex Pump:

Replace 1 link & 2 pins.

Pins @ $1.00 each	$2.00		
Link @ $2.00 each	2.00		
6 hrs. Machinist & Helper	8.76		
		$12.76	
Overhaul. 8 hrs. Machinist & Helper		11.68	
			$24.44

5" x 4" x 7" Cameron Simplex Pump:

Overhaul. 12 hrs. Machinist & Helper	17.52

5" x 4" x 7" Cameron Simplex Pump:

Overhaul and Repack.

Material	1.89	
16 hrs. Machinist & Helper	23.36	
		25.25

4½" x 2¾" x 4" Blake Knowles Simplex Pump with Receiver: No. 194374:

Replace 2 links and 4 pins.

2 Links @ $2.00 each	4.00	
4 pins @ $1.00 each	4.00	
8 hrs. Machinist & Helper	11.68	
		19.68

Repack & Overhaul.

Material	1.26	
4 hrs. Machinst & Helper	5.84	
	7.10	
		26.78

5" x 2½" x 6" Cameron Simplex Pump—4:

Overhaul & Repack 4 pumps.

Material	5.04	
64 hours Machinist & Helper	93.44	
		98.48

1696

5″ x 4″ x 7″ Cameron Simplex Pump:		
Overhaul & Repack:		
Material	1.26	
16 hours Machinist & Helper	23.36	
		24.62
[fol. 3871] 5″ x 7″ x 7″ Cameron Simplex Pump:		
Overhaul & Repack.		
Material	$1.89	
16 hours Machinist & Helper	23.36	
		$25.25
Shriver 30″ Square top, corner feed open delivery C. I. filter presses—4:		
Replace 100—C. I. Plates.		
Material	1,150.00	
8 hours Machinist & Helper	11.68	
		1,161.68
		$1,428.64
[fol. 3872] Yards:		
54′ 0″ x 28′ 6″ Steel Tar Tanks—2:		
Caulk 168 Rivets. 28 hours Caulker & Helper	$49.00	
Caulk 36′ 0″ of seam. 7 hours Caulker & Helper	12.25	
		$61.25

20′ 0″ dia. x 19′ 6″ high Wooden Sulphate Liquor Tank (North of Cyanogen Plant):

Weld Ends on Strap.

Blacksmith & Helper 2 hours	2.88	
Machinist & Helper 2 hours	2.92	
		5.80
		$67.05

[fol. 3873] Coal Handling Apparatus (North Shore):

Brown Hoisting Machy. Company's Steel Coal Bridge complete with driving & operating motors with 1 Hayward Bucket of 7 G. T. Capacity Center Span 250′ 3″ with 173′ 10″ cantilevers:

Replace 2 C. I. Rail Wheels. 535 # each @ $.09 per # x 2 ..... $96 30

Mead Morrison Mfg. Co. Steel Rapid Coal Unloaders complete with driving Motors & 1 Hayward Bucket of 2 G. T. capacity:

Replace 1 Bevel Gear 20″ dia.

1 Gear	$ 40 50	
8 hours Machinist & Helper	11 68	
		$52 18

Replace 2 Worm Gears.			
Worm Gears 2 @ $37 40	74 80		
16 hours Machinist & Helper	23 36		
		98 16	
Replace 1 Worm Gear Shaft. Worm Gear			102 00
			252 34
			$348 64

[fol. 3874] Coal & Coke Handling—Horizontal Retort House H. R.:

Riter-Conley Coke Conveyors with 25 H. P. Motor & Supports—8:

No. 2 (North End):

Replace 1 spur gear 55" dia.			
Material	$161 00		
8 hrs. Mach. & Helper	11 68		
		$172 68	
Replace 1 pinion 9" dia.			
Material	19 00		
6 hrs. Mach. & Helper	8 76		
		27 76	
			$200 44

No. 3 (North End):

Replace 1 sprocket 38" dia.

Material	25 50		
6 hrs. Machinist	8 76		
		34 26	

Replace 2 pinions 9" & 7" dia.

Material $19.00 plus $17	36 00		
8 hrs. Mach. & Helper	8 76	44 76	

Replace 1 spur gear 38" dia.

Material	101 50		
8 hrs. Mach. & Helper	11 68		
		113 18	
			192 20

No. 4 (North End):

Replace 1 spur gear 38" dia.

Material	101 50		
8 hrs. Mach. & Helper	11 68		
		113 18	

Replace 1 pinion 7" dia.

Material	17 00		
6 hrs. Mach. & Helper	8 76		
		25 76	

Replace 1 sprocket 38″ dia.			
Material	25 50		
6 hrs. Mach. & Helper	8 76		
		34 26	
			173 20
No. 1 (North End):			
Replace 1 spur gear 55″ dia.			
Material	161 00		
8 hrs. Mach. & Helper	11 68		
		172 68	
Replace 1 pinion 7″.			
Material	17 00		
6 hrs. Mach. & Helper	8 76		
		25 76	
			198 44
[fol. 3875] No. 6 (South End):			
Replace 1 spur gear 38″ dia.			
Material	$105 50		
8 hrs. Mach. & Helper	11 68		
		$113 18	
Replace 1 pinion 7″ dia.			
Material	17 00		
6 hrs. Mach. & Helper	8 76		
		25 76	

Replace 1 sprocket 38″ dia.			
Material	25 50		
6 hrs. Mach. & Helper	8 76		
		34 26	
No. 7 (South End):			$173 20
Replace 1 Spur Gear 55″ dia.			
Material	161 00		
8 hrs. Mach. & Helper	11 68		
		172 68	
Replace 1 spur gear 38″ dia.			
Material	101 50		
8 hrs. Mach. & Helper	11 68		
		113 18	
No. 8 (South End):			285 86
Replace 1 Sprocket 38″ dia.			
Material	25 50		
6 hrs. Mach. & Helper	8 76		
		34 26	
Replace 1 spur gear 55″ dia.			
Material	161 00		
8 hrs. Mach. & Helper	11 68		
		172 68	
			206 94
			1,430 28

[fol. 3876] Coal & Coke Handling:

"D" Ash Handling D. A. H.:

Robins Conveying Belt Co. 30" Conveyor 360' 0" C to C with 15 H. P. Motor:		
Replace Belt. 725' 0" @ $3.60	$2,610 00	
Replace 100 sq. ft. of steel plate. 100 sq. ft. x 5.1 x .15	76 50	
		$2,686 50
Robins Conveying Belt Co. 30" Conveyor 153' 0" C to C with 15 H. P. Motor:		
Replace belt. 310' 0" @ $3.60 per ft.	1,116 00	
Replace 100 sq. ft. of steel plate. 100 sq. ft. x 5.1 x 15	76 50	
		1,192 50
Robins Conveying Belt Co. 30" Belt Conveyor 276' 6" C to C with 25 H. P. Motor:		
Replace Belt. 560 ft. @ $3.60 per ft.	2,016 00	
Replace 2 guide rollers.		
2 rollers @ $3.00 each	$6 00	
1 hour Machinist & Helper	1 46	
		7 46

New plates on Boot. 1 plate 2' 0" x 2' 10" x 1/4" 1 plate 3' 0" x 3' 0" x 1/4".

2x2.83x10.2 equals	57 73		
3x3x1012 equals	91 80		
	149 53#		
149 53# @ $.15 per #		22 43	

Motor:

Replace 1 set of sleeves.

Material	15 00		
1 hour Machinist & Helper	1 46		
		16 46	

Rebabbit 3 bearings.

36# @ $.50 per#	18 00		
16 hours Machinist & Helper	23 36		
		41 36	

Replace 2 pinions 5 1/8" dia.

2 pinions	18 80		
12 hours Machinist & Helper	17 52		
		36 32	
			2,140 03

[fol. 3877] Generator House D. G.:

Coal Conveyor Top of Generator House D. G.:

Replace 1 spurgear 24" dia.	$32 70		
8 hours Machinist & helper	11 68		
		$44 38	
Replace 1 plate chute 1' 4" x 3' 0" x ¼" (1.33 x 3.0 x 10.2 x .15)		6 11	
			$50 49

"B" Coke Bin South B. H. S.:

Coke Conveyors from Horizontal Retort House to Coke Bin—4:

Replace 4 guards (See figures north end) 184.65 x 4		$738 60	
Replace 4 bodies (See figures north end) 396.45 x 4		1,585 80	
Replace 240' 0" of 1" double pipe rail 240' 0" @ 1.88 per ft.		451 20	
Replace 2 pinions 11" dia.			
Material	$28 00		
12 hours Machinist & helper	17 52		
		45 52	
			2,821 12

11 Breeze Bins and 16 Breeze Chutes with cable, sheaves, counterweights & hoists:

Replace 4 chutes (see calculation north end)		2,402 40	
Replace 3 chutes with screen & aprons (see calculation north end)		298 80	
			2,701 20

Link Belt Co. Dodge Bucket Conveyor with 15 H. P. Motor:

Rebabbit 2 bearings.

24# @ $.50 per #	$12 00	
16 hours Machinist & helper	23 36	
		$35 36

[fol. 3878] Yard near Horizontal Retort House H. P.:

Link Belt Co. Double Reciprocating Mixing Feeder with 7½ H. P. Motor—2:

Overhaul. 16 hours Machinist & helper	$23 36	

Link Belt Co. Suspended Flight Conveyor 109' 9" C to C with 30 H. P. Motor:

No. 1:

Replace 1 Spur Gear 39" dia.

Replace 2 Pinions 7" dia.

Spur Gear	77 30	
Pinions—2	22 60	
20 hours Machinist & helper	29 20	
		$129 10

No. 2:

Replace 1 Spur Gear 39" dia.

Replace 1 Pinion 9" dia.

Spur Gear	77 30	
Pinion	14 00	
14 hours Machinist & helper	20 44	$111 74

Nos. 1 & 2:

Clean & paint portion of conveyors 500 sq. ft. @ $.039 per sq. ft.	19 50	260 34

"A" Coke Bin South B. I. S.

11 Breeze Bins & 16 Breeze Chutes with cable sheaves, counterweights & hoists:

Replace 2 chutes (see calculation Horizontal House)	1,201 20	
Replace 1 chute with screen & aprons (see calculation Horizontal House)	99 60	
Replace 5 deflecting aprons (7.5 x 4.0) equals 30 sq. ft. 30 sq. ft. x 12.75 equals 382.50# 382.50# @ $.15 per #	57 38	$1,358 18

[fol. 3879]

Inclined Retort House I. R.:

Debrouwer Coke Conveyors—8:

Conveyors (Horizontal)—4:

Replace C. I. bottom plate on 1 conveyor 27 x 170 x 12 x .5 equals 27,540 cu. in. 27,540 cu. in. x 26# per cu. in. equals 7160# 7160# @ $.09 per lb		$644 40
Replace C. I. Bottom Slides 6 x 170 x 12 x .5 x2 equals 12,240 cu. in. 11,240 cu. in. x .26 x $.09		286 42
Replace C. I. Top Slides 7.5 x 40 x 12 x 5 x 2 equals 3,600 cu. in. 3,600 x .26 x $ 09		84 24

Conveyors inclined to Coke Bin:

Replace 34 sprocket links.		
34 Links @ $.75 per link	$25 50	
4 hours Machinist & Helper	5 84	
		31 34
Replace 4 Spur Gears, 38" dia.		
4 Gears @ $63.10	252 40	
32 hours Machinist & Helper	46 72	
		299 12

Replace 4 Pinions 7″ dia.			
4 Pinions @ $9.70	38 80		
24 hours Machinist & Helper	35 04		
		73 84	
Replace 4 Guards (See Calculation B Coke Bin North B. H. N.)		738 60	
Replace 4 Bodies (See Calculation B—Coke Bin North B. H. N.)		1,585 80	
Replace 240 ft. of 1″ Double Pipe Rail 24′0″ @ $1.88 per ft.		451 20	
			$4,194 96
Robins Conveying Belt Co. 24″ Belt Conveyor, 275′0″ C. with tripper, chutes & 35 H. P. Motor—2:			
Replace 51′0″ of belt 51′0″ @ $2 30 per ft.		117 30	
Replace 4 Pinions and 2 Gear.			
4 Pinions @ $11.30	45 20		
2 Gear	79 00		
40 hrs. Machinist & Helper	58 40		
		182 60	
Replace 32′0″ of 10″ Belt 32′0″ @ $.81 per ft.		25 92	
			325 82

[fol. 2880]

"B" Coke Bin North B. H. N.:

Coke Conveyors from Horizontal Retort House to Coke Bin—4:

For Conveyors 1 & 2:

Replace 1 Gear 11" dia.

Material	$14.00	
6 hours Machinist & Helper	8.76	
		$22.76

Replace 1 Gear 8" dia.

Material	10.60	
6 hours Machinist & Helper	8.76	
		19.36

For Conveyors 3 & 4:

Replace 2 Gear 11" dia.

Material	28.00	
12 hours Machinist & Helper	17.52	
		45.52

For Conveyors 1, 2, 3 & 4:

Replace 4 Guards (.75 plus 2.33 plus .75) x 42.0 equals 160.86 sq. ft. 160.86 sq. ft x 7.65# sq. ft equals 1,231 lbs. 1231# @ $.15 per lb. x 4 ..... 738 60

Replace 4 bodies 2 plates 2'0" x 50'0" x 3/16" 1 plate 2'3" x 50'0" x 3/16" 2 angles 2 x 2" x 3/16" x 50'0".

(2 x 2 x 50) x 7.65 equals	1,530#
(2.25 x 50) x 7.65 "	861#
(2.33 x 50) x 7.65 "	252#
	2643#
2643 # @ $ 15 per lb. x 4	1,585 80

Replace 240' 0" of 1" Double Pipe Rail 240' @ $1 88 per ft. 451 20

2,775 60 $2,863 24

11 Breeze Bins & 16 Breeze Chutes with Cable, Sheave, Counterweights and Hoists:

Replace 4 Chutes.

2 plates 5' 0" x 4' 0" x 1/4"	408
2 plates 9' 0" x 15' 0" x 1/4"	2754
1 plate 5' 0" x 5' 0" x 1/4"	256

2 plates 1′ 0″ x 6′ 0″ ¼″	132		
1 angle 2½ x 2½ x ¼″ x 70′ 0″	300		
2 angles 3″ x 3″ x ⅜″ x 6′ 0″	92		
1 angle 4″ x 4″ x ⅜″ x 6′ 0″	62		
	4004#		
4004 lbs. @ $ 15 per lb. x 4		2,402 40	
[fol. 3881] Replace 3 Chutes with Aprons and Screens.			
2 plates 12′ 0″ x 1′ 3″ x 3/16″	230		
1 plate 3′ 0″ x 1′ 0″ x 3/16″	31		
1 screen 3′ 0″ x 5′ 0″	115		
2 plates 5′ 0″ x 1′ 0″ x 3/16″	77		
1 plate 3′ 0″ x 5′ 0″ x 3/16″	115		
1 plate 3′ 0″ x 1′ 9″ x 3/16″	40		
2 plates 1′ 9″ x 1′ 10″ x 3/16″	50		
2 angles 1½″ x 1½″ x 1′ 9″ x 3/16″	6		
	664#		
664# @ $ 15 per lb. x 3		$298 80	
			$2,701 20

Link Belt Co. Dodge Bucket Conveyor with .15 H. P. Motor:			
Replace steel shaft.			
Material	20 00		
6 hours Machinist & Helper	8 76		
		28 76	
Replace 1 spur gear.			
Gear 58" dia.	180 00		
8 hours Machinist & Helper	11 68		
		191 68	
Rebabbit 2 bearings.			
24# @ $ 50 per lb.	12 00		
16 hours Machinist & Helper	23 36		
		35 36	
			255 80
Coke Elevator C. E. H.			
Riter Conley Mfg. Co. No. 1 Coal—4, Breaker with 25 H. P. Motor:			
Repair Chute. 1 plate 3' 0" x 1' 3" x ¼" (3 x 1 25) x 10 2 equals 38 25# 38 25 # @ $ 15 per lb.			5 74

[fol. 3882] Link Belt Co. Gravity discharge Bucket Elevator with 25 H. P. Motor:

Replace 1 steel plate and angle, 1 plate 4′ 0″ x 5′ 6″ x ⅛″, 1 angle 2″ x 2″ x 5′ 6″ x ⅛″:

4 x 5.5 x 5.1 equals 112#
33 x 5.5 x 5.1 equals 9#

121#

121# @ $.15 per lb.		$18 15	
Replace 3 shrouded pinions & 1 gear:			
2 Pinions 11″ dia	$45 40		
1 Pinion 14½″ dia.	51 50		
1 Gear 64″ dia.	224 00		
24 hrs. Machinist & Helper	35 04		
		355 94	
			$374 09

"A" Coke Bin North B. I. N.:

11 Breeze Bins & 16 Breeze Chutes with Cable Sheaves, Counterweights and Hoists:		
Replace 4 chutes (See Calculation Hor. House)	2,402 40	
Replace 4 Chutes with Screens & Aprons (See Calculation Hor. House)	398 40	
		2,800 80

Link Belt Co. Dodge Bucket Conveyor with 15 H. P. Motor:			
Replace Steel Plate. 3.5 x 4.5 x 5.1 equals 80.33# 80.33# @ $.15 per lb.		12.05	
Replace 1 spur gear 42" dia., 1 spur gear 56" dia., 1 pinion 16" dia., 1 pinion 9" dia.:			
Material	241.60		
32 hours Machinist & Helper	46.72		
		288.32	
			300.37
Yard Near Inclined Retort House:			
Link Belt Co. Suspended Fight Conveyor 109 ft. C to C with 25 H. P. Motor Replace 1 pinion 5½" dia.:			
1 Pinion		9.50	
6 hours Machinist & Helper		8.76	
			18.26
[fol. 3883] Link Belt Co. Double Reciprocating Mixing Feeder with 10 H. P. Motor—2:			
Overhaul Eccentrics. 8 hours Machinist & Helper			$11.68

Coal Elevator C. E. I.:

Link Belt Co. Gravity Discharge Bucket Elevators with Chute and 25 H. P. Motor—2:

Replace Steel Plates & 1 screen.

2 x (6 x 5.5) x 5.1 plus 5% equals	353#			
2 x (16 x 5.5) x 5.1 equals	898#			
(7 x 5.5) x 5.1 equals	196#			
	1447#			
1447# @ $.15 per lb.			217.05	
Replace 4 Buckets. 4 (2.0 plus 3.42 plus 3.42) x 1 x 5.1 equals 221# 221# @ $.15 per lb.			33.15	
Replace 1 pinion 10" dia.				
1 Pinion		$18.50		
6 hours Machinist & Helper		8.76		
			27.26	
				277.46

28″ x 36″—2 Roll Coal Crusher, 48″ x 36″—2 Roll Coal Crusher—2:

Replace 2 Crusher Rolls.

Material	583 42	
32 hours Machinist & Helper	46 72	
		630 14
		$29,458 92

[fol. 3884] Berrians Island Oil Pump House O. P. H.:

10″ x 12″ Dean Horizontal Triplex Double—2 Double Acting Pump geared to 30 H. P. General Electric Co. Induction Motor, No. 70426 & D-98646:

Overhaul crossheads, conecting rods & 7 main bearings. 16 hours Machinist & Helper		$23.36

Oil Tanks Berrians Island:

73′ 0″ dia. x 30′ 0″ high Steel Oil Tank Capacity 1,000,000 gals.—2:

Paint (73.0 x 3.14 x 32) plus (73 x 73 x .7854) equals 11520 sq. ft. 11520 sq. ft. x $.012 x 2	$276.48	
Caulk 35 ft. of Seam 7 hours Caulker & Helper	12.25	
		$288.73

108′ 0″ dia. x 29′ 7″ high Steel Oil Tank Capacity 2,000,000 gals—2:

Paint (108 x 3.14 x 29.58) plus (54 x 54 x 3.14) equals 19187 sq. ft. 19187 sq. ft. @ $.012 x 2	460.49	
		749.22

[fol. 3885] Oil Tanks W. G. T.:

Pipe Covering 140′ of 6″ Std. Magnesia Pipe Covering @ $.45			$63.00
Pipe Repairs, Small Piping:			
Replace 2—12″ gaskets	$2.56		
Replace 2—12″ flanges	14.94		
		17.50	
			$80.50

[fol. 3886] Tar Separation System W. G. T. S.:

90′ ¾″ x 25′ ½″ x 8′ 7¼″ Steel Tar Settling Tanks—4:	
Clean & Paint (90.06 plus 25.04 plus 90.06 plus 2.04) x 8.60 plus (90.06 x 25.02) equals 4233 sq. ft. 4233 sq. ft. @ $.039 per sq. ft.	$165 09
50′ 0″ dia. x 27′ 6″ high steel Tar Tanks—2:	
Caulk 54 Rivets & 21′ 0″ of vertical seam 13 hours Caulker & Helper	22 75
Pipe Repairs, Small Piping: Repair 12—B. S. Joints 12″	$29 16
	217.00

[fol. 3887] Miscellaneous:

General Inspection of Running Machinery, Gauges, etc	$5,000 00

[fol. 3888] PLAINTIFF'S EXHIBITS Nos. 868, 868X

Value of the Property of Gas Companies Affiliated with the Consolidated Gas Company of New York Jointly Used with the Consolidated Gas Company of New York in Its Gas Business As of June 1st, 1923

[fol. 3889] EXHIBIT 868X

Page 1 of Plaintiff's Exhibit 868 Corrected

Value of the Property of The Astoria Light, Heat & Power Company Used in Its Gas Business, As of June 1st, 1923

Value of the Property of The Astoria Light, Heat & Power Co., as of June 1st, 1923		$48,513,148.00
Value of The Luyster Creek Coal Handling Property devoted to uses of Companies other than the Astoria Light, Heat & Power Co., as of June 1st, 1923	$1,622,211.33	
Value of Mains, Services, Meters and Gas Appliances of The Astoria Light, Heat & Power Co., as of June 1st, 1923	9,785.00	1,631,996.33
		$46,881,151.67
Of the above amount, 80.074419% is devoted to the uses of The Consolidated Gas Co. of New York		$37,539,809.82

[fol. 3890] EXHIBIT 868

Value of the Property of The Astoria Light, Heat & Power Co. Used in Its Gas Business, As of June 1st, 1923

Value of the Property of The Astoria Light, Heat & Power Co., as of June 1st, 1923		$49,068,417.00
Value of The Luyster Creek Coal Handling Property devoted to uses of Companies other than the Astoria Light, Heat & Power Co., as of June 1st, 1923	$1,622,211.33	
Value of Mains, Services, Meters and Gas Appliances of The Astoria Light, Heat & Power Co., as of June 1st, 1923	9,785.00	
		1,631,996.33
		$47,436,420.67
Of the above amount, 80.074419% is devoted to the uses of The Consolidated Gas Co. of New York		$37,984,438.25

[fol. 3891] Value of The Luyster Creek Coal Handling Property of The Astoria Light, Heat and Power Co. As of June 1st, 1923

Land as appraised by Mr. Robert Huntley (G110)	$370,431
Coal Handling Equipment and Accessories (Other than Land and Buildings). (G121, G122a, G122c, 221, G141a, 222, G141b, G143b, G145, G143a, 224, 225, 238)	808,571
Special Reinforced Concrete Bulkhead, as appraised by Mr. C. E. Trout	528,605
Omissions and Contingencies	40,429
Organization and Development prior to Construction (101 and G102)	115,000
Cost of Financing	121,000

Engineering, Superintendence and General Contractor's Expense and Profit (G281)	179,089
Interest during Construction (G285)	205,318
Taxes during Construction (G284)	25,957
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G285)	38,917
Total	$2,433,317
Of the above amount 66⅔% is devoted to uses of companies other than the Astoria Light, Heat & Power Company	$1,622,211.33

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3892] Value of Mains, Services, Meters and Gas Appliances of the Astoria Light, Heat & Power Co. as of June 1st, 1923

Street Mains as appraised by Mr. Colin C. Simpson (231)	$6,713
Services as appraised by Mr. Colin C. Simpson (232)	232
Meters, Cocks, etc., as shown on the books of the Company (233 & 234)	117
Gas Appliances, as shown on the books of the Company (236 & 239)	10
Organization and Development prior to Construction (101 & G102)	465
Cost of Financing	489
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	873
Interest during Construction (G285)	696
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	190
Total	$9,785
Of the above amount, 100% is devoted to uses of The Astoria Light, Heat & Power Co.	$9,785

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3893] Value of the 48" Harlem River Main of the Standard Gas Light Co. as of June 1st, 1923

48" Main as appraised by Mr. Colin C. Simpson (231)	$337,832
Organization and Development prior to Construction (101 and G102)	22,000
Cost of Financing	23,500
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	43,918
Interest during Construction (G285)	34,824
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	9,544
Total	$471,618
Of the above amount 56.4459027% is devoted to uses of The Consolidated Gas Co. of New York	$266,209.03

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3894] Value of the 62nd Street Boiler and Governor House of the Standard Gas Light Co. as of June 1st, 1923

Land as appraised by Mr. Robert Huntley (G110)	$52,000
Buildings as appraised by Mr. Henry R. Burt (221)	75,159
Boiler and Governor House (Other than Land and Buildings) (G141a, G141b, G143b, G145b, G143a, 225, 238)	129,519
Omissions and Contingencies	6,476
Organization and Development prior to Construction (101, G102)	17,000
Cost of Financing	18,000

Engineering, Superintendence and General Contractor's Expense and Profit (G281)	27,451
Interest during Construction (G285)	30,606
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	5,965
Taxes during Construction (G284)	2,055
Total	$364,241
Of the above amount 33-1/3% is devoted to the uses of The Consolidated Gas Company of New York	$121,413.67

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3895] Standard Gas Light Company 62nd Street Station Summary of Costs

Boiler Room	$49,414 86
Engine Room	64,771 79
Holders	1,036,707 07
General Connections	70,086 56
Small Piping	15,332 52
Total	$1,236,312 80

Boiler and Governor House

Boiler Room	$49,414 86
Engine Room	64,771 79
Small Piping	15,332 52
Total	$129,519 17

62nd Street Station

The Bartlett Hayward Company, Baltimore, Md.

Building: Boiler Room.—Apparatus.

Item	Material	Quantity	Unit	Unit price	Total cost
B–204 B–240 B–168 C–1	B & W Water Tube Boilers, 100 Tubes 4″ dia. 16′ long including Vulcan Soot Blowers	4	.....	$8,807.30	$36,229.20
D–68	Foundations	.....	.....	.....	1,436.07
B–204 C–3	660 H. P. Cochrane Feed Water Heater, 2′ 6″ x 2′ 6″ x 6′ 0″ with supports	1	.....	.....	788.37
B–204 C–4	Turbo Blower, Sturtevant, Type TU I, 3800 R. P. M.	1	.....	.....	288.00
B–246 C–4	Turbo Blower, Coppus Eng. and Equipment Co.	3	.....	257.85	773.55
B–205 C–5	Breeching for Boilers	1	.....	.....	2,013.95
B–206 C–16	6″ Ashcroft Indicating Pressure Gauge, 0 to 160#	1	.....	.....	8.39
B–206 C–16	6″ U. S. Indicating Pressure Gauge, 0 to 180#	1	.....	.....	8.39
B–206 C–14	9″ Straight Thermometer, 80 degrees to 260 degrees	1	.....	.....	19.33

Building: Boiler Room—Apparatus—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
B–204	Radial Brick Stack, octagonal base, 6'				
C–2	dia. 125' high	1	.....	.....	4,400.00
D–70	Stack Foundation	.....	.....	.....	3,145.47
B–240	Pump, Worthington Duplex. 7½" x				
C–7	4½" x 6" (Boiler Feed)	1	.....	.....	210.50
D–77	Foundation	.....	.....	.....	25.53
	Carried forward				$48,346.75
[fol. 3897]	Brought forward	.....	.....		$48,346 75
B–209	Hand Drip Pump in holder yard	10	.....	10.70	107.00
C–7					
B–206	Pump, duplex Davidson, 9" x 6" x 12"				
C–7	x 12" tandem water cylinders (Boiler				
	feed).	1	.....	.....	627.00
D–74	Foundation	.....	.....	.....	37.49
A–240	Steel Boiler Blow-off Tank 3' dia. x				
C–8	10' long	1	.....	.....	196.00
D–69	Foundation	.....	.....	.....	12.62
B–208	1/12 cu. ft. Wet Meter	.....	.....	.....	80.00
C–17					
B–208	Double Dry Governor	.....	.....	.....	8.00
C–18					
	Total	.....	.....	.....	$49,414 86

[fol. 3898] Building: Engine Room.—Apparatus:

E–200 C–11	Gas Exhauster, P. H. and F. M. Roots, size 12, complete with engines. Direct connected to Single Cylinder Vertical Steam Engine Buckeye Eng. Co., 17″ x 24″ equipped with McCord Oil Lubricators and Revolution Counter	2	.....	14,959.78	$29,919.56
D–75	Foundation	.....	.....	.....	7,975.35
B–200 C–10	36″ Special, balance governor	3	.....	2,932.50	8,797.50
B–200 C–10	24″ Special, balance governor	1	.....	.....	1,567.50
B–201 C–9	Gauge Board, Marble, 10′ 6″ x 5′ 6″ front, 4′ 0″ x 3′ 0″ side, with 14″ shelf, complete with steel and pipe supports, piping, fittings, etc.	1	.....	.....	658.30
B–202 C–16	12″ Crosby Indicating Pressure gauge, 0 to 300#	1	.....	.....	24.00
B–202 C–13	12″ Foxboro Recording Pressure Gauge	2		44 40	88 80
B–202 C–16	Arch Gauge American Meter Co., 0 to 12″ of Water	4	.....	73.50	294.00
B–202 C–16	6″ U Gauges	4	.....	5.85	23.40

Building: Boiler Room—Apparatus—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
B–244 C–12	Sturtevant Gas Blower, size 10, Design 5. Direct connected to 235 H. P. Sturtevant Turbine	2	.....	6,077 41	12,154 82
D–76	Platform, supports, and foundation	.....	.....	.....	2,907.34
	Carried forward	.....	.....	.....	$64,410 57
[fol. 3899]	Brought forward				$64,410 57
B–202 C–14	8″ Foxboro Indicating Thermometer 0 to 120°	2	.....	36.50	73.00
B–203 C–15	Kennedy Telemetric Gauge Indicator	2	.....	119.00	238.00
B–203 C–16	30″ U-Gauge	1	.....	.....	23.05
B–203 C–16	20″ U-Gauge	1	.....	.....	16.85
B–203 C–16	4″ Mercury U-Gauge	2	.....	5.16	10.32
	Total	.....	.....	.....	$64,771 79

[fol. 3900] Building: Commercial Holders.
—Apparatus:

C–116	5 Lift Holder, in steel tank 190′ 10″ dia. x 41′ deep. Capacity 5,000,000 cu. ft.	2	.....	$383,022	$766,044.00
D–73	Foundation, Holder #1	.....	.....	.....	157,093.88
D–79	Foundation, Holder #2	.....	.....	.....	113,569.19
	Total	.....	.....	.....	$1,036,707 07

[fol. 3901] 62nd Street Holder Station

Building: General Connections:

Gas Pipe

Item	Material	Quantity	Unit	Unit price	Total cost
G–4	8″ C. I. B. & S.	150	lin. ft.	3.01	$451.50
"	24″ " "	25	"	12.29	307.25
"	30″ " "	22	"	15.90	349.80
"	30″ " Flanged	15	"	19.15	287.25
"	36″ " "	48	"	24.23	1,163.04
"	36″ Riveted Steel	57	"	9.05	515.85
"	48″ " "	99	"	11.05	1,093.95
	Total	416	.....	.....	$4,168.64

Building: General Connections—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
	Gas Pipe Fittings				
X–128	24″ C. I. B. & S.	3,999	lbs.	.1038	$415.10
"	30″ " "	5,764	"	.1136	654.79
"	36″ " "	37,764	"	.1198	4,524.13
"	24″ " Flanged	7,068	"	.1139	805.05
"	30″ " "	16,337	"	.1232	2,012.72
"	36″ " "	127,885	"	.1258	16,087.93
"	48″ " "	20,234	"	.1287	2,604.12
"	36″ Steel "	4,534	"	.1450	657.43
"	48″ " "	45,404	"	.1340	6,084.14
	Total	268,989	.....	.....	$33,845 41
	Valves				
G–1	10″ O. S. Gate Valve	2	each	96.22	$192.44
"	24″ " " "	6	"	267.84	1,607.04
"	30″ " " "	8	"	413.00	3,304.00
"	36″ " " "	22	"	569.77	12,534.94
"	48″ " " "	6	"	1,307.00	7,842.00
"	30″ I. S. " "	1	"	351.50	351.50

"	36"	"	"	"	.....	7	"	486.37	3,404.59
"	48"	"	"	"	.....	1	"	1,124.00	1,124.00
		Total			.....	53	.....	.....	$30,360.51
G-1	Floor Stands				.....	28	.....	38.00	1,064.00
"	Floor Stands with Bevel Gears				.....	12	.....	54.00	648.00
		Total			.....	40	.....	.....	$1,712.00

[fol. 3902] Summary:

Gas Pipe	416	lin. ft.	.....	$4,168 64
Gas Pipe Fittings	268,989	Lbs.	.....	33,845.41
Valves	53	.....	.....	30,360.51
Floor Stands	40	.....	.....	1,712.00
Total				$70,086.56

Building: General Connections—Continued

Item [fol. 3903]	Material	Quantity	Unit	Unit price	Total cost
	Building: Small Piping:				
	Standard Steel Pipe				
E–1–9	¼" Diameter	58	lin. ft.	.27	$15.66
"	⅜" "	126	"	.27	34.02
"	½" "	83	"	.30	24.90
"	¾" "	831	"	.37	307.47
X–119	1" "	687	"	.51	350.37
E–1–9	1¼" "	492	"	.73	359.16
"	1½" "	791	"	.88	696.08
"	2" "	1,802	"	1.13	2,036.26
"	2½" "	65	"	1.81	117.65
X–119	3" "	1,556	"	2.07	3,220.92
E–1–9	3½" "	1	"	2.64	2.64
X–119	4" "	387	"	2.91	1,126.17
E–1–9	5" "	9	"	3.92	35.28
X–119	6" "	172	"	5.40	928.80
E–1–9	8" "	170	"	7.19	1,222.30
X–119	10" "	149	"	9.59	1,428.91
	Total	7,379	"	.....	$11,906.59
	Standard Galv. Pipe				
E–2	½" Diameter	39	Lin ft.	$.34	$13.26
"	¾" "	2	"	.42	.84

"	2"	"		160	"	1.28	204.80
"	3"	"		3	"	2.38	7.14
		Total		204	"	.....	$226.04
			Extra Heavy Galv. Pipe				
E–2	2½"	Diameter		93	Lin. ft.	$2.39	$222.27
"	4"	"		18	"	4.22	75.96
"	5"	"		62	"	5.87	363.94
		Total		173	"	.....	$662.17
[fol. 3904]			**Trenching**				
E–9	¾"	to 4" Pipe		1,429	Lin. ft.	$.42	$600.18
"	8"	"		150	"	.52	78.00
		Total		1,579	.....	.....	$678.18

Pipe Covering

E-4-5-8	½" diameter (Asbestos)	7	Lin. ft.	$.32	$2.24
	1" " "	202	"	.36	72.72
	1¼" " "	153	"	.40	61.20
	1½" " "	389	"	.42	163.38
	2" " "	401	"	.44	176.44
	2½" " "	72	"	.50	36.00
	3" " "	647	"	.54	349.38
	4" " "	106	"	.70	74.20
	5" " "	52	"	.80	41.60
	6" " "	98	"	.90	88.20
	8" " "	94	"	1.18	110.92
	10" " "	21	"	1.40	29.40
E-4-5	¼" " Hair Felt	56	"	.38	21.28
	½" " "	25	"	.40	10.00
	¾" " "	296	"	.42	124.32
	1" " "	208	"	.44	91.52
	1¼" " "	60	"	.47	28.20
	2" " "	701	"	.54	378.54
	Total	3,588	"	.....	$1,859.54

Summary:

Standard Steel Pipe	7,379	Lin. ft.	.....	$11,906.59
Standard Galv. Pipe	204	"	.....	226.04
Extra Heavy Galv. Pipe	173	"	.....	662.17
Trenching	1,579	"	.....	678.18
Pipe Covering	3,588	"	.....	1,859.54
Total				$15,332.25

[fol. 3905] Value of the 48" and 60" Mains in Long Island City and Astoria, Property of the East River Gas Company as of June 1st, 1923

48" and 60" Mains, as appraised by Mr. Colin C. Simpson	$1,064,464
Organization and Development prior to Construction (101, G102)	70,000
Cost of Financing	74,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	138,380
Interest during Construction (G285)	109,833
Administrative, Legal and Misc. General Expense during Construction (G282, G283, G286	30,071
Total	$1,486,748
Of the above amount, 56.445902% is devoted to uses of The Consolidated Gas Co. of New York	$839,208.32

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3906] Value of The Astoria Tunnel and the Ravenswood Tunnel of the East River Gas Co. As of June 1st, 1923

Land, as appraised by Mr. F. K. Stevens (G110)	$64,400
Tunnel Head Houses and Appurtenances, as appraised by Mr. Henry R. Burt (221, 239, G145)	192,479
Ravenswood Tunnel, as appraised by Mr. J. V. Davies	893,444
Equipment of Ravenswood Tunnel as appraised by Mr. Colin C. Simpson (231, 239)	195,145
Astoria Tunnel, as appraised by Mr. J. V. Davies	8,750,676
Equipment of Astoria Tunnel, as appraised by Mr. Colin C. Simpson (231, 239)	1,121,741

Organization and Development prior to Construction (101, G102)	734,000
Cost of Financing	772,900
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	292,659
Interest during Construction (G285)	2,014,078
Taxes during Construction (G284)	149,158
Administrative, Legal and Misc. General Expense during Construction (G282, G286)	286,154
Total	$15,466,834
Of the above amount, 56.445902% is devoted to the uses of The Consolidated Gas Co. of New York	$8,730,393.96

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3907] PLAINTIFF'S EXHIBITS NOS. 869, 869X

Value of the Property of Gas Companies Affiliated with the Consolidated Gas Company of New York Jointly Used with the Consolidated Gas Company of New York in its Gas Business as of June 1st, 1923

[fol. 3908] PLAINTIFF'S EXHIBIT NO. 869X

Page 1 of Plaintiff's Exhibit 869 Corrected

Value of the Property of the Astoria Light, Heat & Power Co. Used in Its Gas Business, as of June 1st, 1923

Value of the Property of The Astoria Light, Heat & Power Co., as of June 1st, 1923	$47,357,064.00
Value of The Luyster Creek Coal Handling Property devoted to uses of Companies other than The Astoria Light, Heat & Power Co., as of June 1st, 1923	$1,575,225.33

Value of Mains, Services, Meters and Gas Appliances of The Astoria Light, Heat & Power Co., as of June 1st, 1923	9,785 00	1,585,010 33
		$45,772,053 67
Of the above amount, 80.074419% is devoted to the uses of The Consolidated Gas Co. of New York		$36,651,706 04

[fol. 3909] PLAINTIFF'S EXHIBIT 869

Value of the Property of the Astoria Light, Heat & Power Co. Used in Its Gas Business as of June 1st, 1923

Value of the Property of The Astoria Light, Heat & Power Co., as of June 1st, 1923		$47,912,333 00
Value of the Luyster Creek Coal Handling Property devoted to uses of Companies other than The Astoria Light Heat & Power Co., as of June 1st, 1923	$1,575,225 33	
Value of Mains, Services, Meters and Gas Appliances of The Astoria Light, Heat & Power Co., as of June 1st, 1923	9,785 00	1,585,010 33
		$46,327,322 67
Of the above amount, 80.074419% is devoted to the uses of The Consolidated Gas Co. of New York		$37,096,334 47

[fol. 3910] Value of the Luyster Creek Coal Handling Property of the Astoria Light, Heat and Power Co. as of June 1st, 1923

Land as appraised by Mr. F. K. Stevens	$315,260.
Coal Handling Equipment and Accessories (Other than Land and Buildings) (G121, G122a, 221, G122c, G141a, 222, G141b, G143b, G145, G143a, 224, 225, 238)	808,571.
Special Re-inforced Concrete Bulkhead, as appraised by Mr. C. E. Trout	528,605.
Omissions and Contingencies	40,429.
Organization and Development prior to Construction (101, G102)	112,000.
Cost of Financing	118,000.
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	179,089.
Interest during Construction (G285)	196,010.
Taxes during Construction (G284)	25,957.
Administrative, Legal and Misc. General Expense during Construction (G282, G283, G286)	38,917.
Total	$2,362,838.
Of the above amount, 66⅔% is devoted to uses of companies other than The Astoria Light, Heat & Power Co	$1,575,225 33

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3911] Value of Mains, Services, Meters and Gas Appliances of the Astoria Light, Heat & Power Co. as of June 1st, 1923

Street Mains as appraised by Mr. Colin C. Simpson (231)	$6,713.
Services as appraised by Mr. Colin C. Simpson (232)	232.
Meters, Cocks, etc., as shown on the books of the Company (233, 234)	117.

Gas Appliances, as shown on the books of the Company (236, 239)	10
Organization and Development prior to Construction (101, G102)	465
Cost of Financing	489
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	873
Interest during Construction (G285)	696
Administrative, Legal and Misc. General Expense during Construction (G282, G283, G286)	190
	$9,785
Of the above amount, 100% is devoted to uses of The Astoria Light, Heat & Power Co	$9,785

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3912] Value of the 48" Harlem River Main of the Standard Gas Light Co. as of June 1st, 1923

48" Main, as appraised by Mr. Colin C. Simpson (231)	$337,832
Organization and Development prior to Construction (101, G102)	22,000
Cost of Financing	23,500
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	43,918
Interest during Construction (G285)	34,824
Administrative, Legal and Misc. General Expense during Construction (G282, G283, G286)	9,544
Total	$471,618
Of the above amount, 56.445902% is devoted to uses of The Consolidated Gas Co. of New York	$266,209 03

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3913] Value of the 62nd Street Boiler & Governor House of the Standard Gas Light Co. as of June 1st, 1923

Land, as appraised by Mr. F. K. Stevens (G110)	$52,000
Buildings, as appraised by Mr. Henry R. Burt (221)	75,169
Boiler & Governor House (Other than Land and Buildings) (G141a, G141b, G143b, G145, G143a, 225, 238)	129,519
Omissions and Contingencies	6,476
Organization and Development prior to Construction (101, G102)	17,000
Cost of Financing	18,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	27,451
Interest during Construction (G285)	30,606
Administrative, Legal and Misc. General Expense during Construction (G282, G283, G286)	5,965
Taxes during Construction (G284)	2,055
Total	$364,241
Of the above amount, 33⅓% is devoted to the uses of The Consolidated Gas Co. of New York	$121,413 67

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3914] Standard Gas Light Company, 62nd Street Station

Summary of Costs

Boiler Room	$49,414 86
Engine Room	64,771 79
Holders	1,036,707 07
General Connections	70,086 56
Small Piping	15,332 52
Total	$1,236,312 80

Boiler and Governor House

Boiler Room	$49,414 86
Engine Room	64,771 79
Small Piping	15,332 52
Total	$129,519 17

The Bartlett Hayward Company, Baltimore, Md.

Item	Material	Quantity	Unit	Unit price	Total cost
	Building: Boiler Room—Apparatus:				
B-204 B-240 B-168 C-1	B. & W. Water Tube Boilers, 100 Tubes 4″ dia. 16′ long, including Vulcan Soot Blowers	4	.....	$8,807 30	$35,229 20
D-68	Foundations	.....	.....	.....	1,436 07
B-204 C-3	660 H. P. Cochrane Feed Water Heater 2′ 6″ x 2′ 6″ x 6′ 0″ with supports	1	.....	.....	788 37
B-204 C-4	Turbo Blower, Sturtevant, Type TU I, 3,800 R. P. M.	1	.....	.....	288 00
B-246 C-4	Turbo Blower, Coppus Eng. and Equipment Co.	3	.....	257 85	773 55
B-205 C-5	Breeching for Boilers	1	.....	.....	2,013 95
B-206 C-16	6″ Asheroft Indicating Pressure Gauge , 0 to 160#	1	.....	.....	8 39
B-206 C-16	6″ U. S. Indicating Pressure Gauge, 0 to 180#	1	.....	.....	8 39
B-206 C-14	9″ Straight Thermometer, 80 degrees to 260 degrees	1	.....	.....	19 33

Building: Boiler Room—Apparauts:—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
B-204 C-2	Radial Brick Stack, octagonal base, 6′ dia. 125′ high	1	.....	.....	4,400 00
D-70	Stack Foundation	.....	.....	.....	3,145 47
B-240 C-7	Pump, Worthington Duplex. 7½″ x 4½″ x 6″ (Boiler Feed)	1	.....	.....	210 50
D-77	Foundation	.....	.....	.....	25 53
	Carried forward				$48,346 75

[fol. 3916]

B-204 B-240 B-168 C-1	B. & W. Water Tube Boilers, 100 tubes 4″ dia. 16′ long, including Vulcan Soot Blowers	4	.....	8,807 30	$35,229 20
D-68	Foundations	.....	.....	.....	1,436 07
B-204 C-3	660 H. P. Cochrane Feed Water Heater, 2′ 6″ x 2′ 6″ with supports	1	.....	.....	788 37
B-204 C-4	Turbo Blower, Sturtevant, Type TU I, 3,800 R. P. M.	1	.....	.....	288 00
B-246 C-4	Turbo Blower, Coppus Eng. and Equipment Co.	3	.....	257 85	773 55
B-205 C-5	Breeching for Boilers	1	.....	.....	2,013 95

B-206 C-16	6″ Ashcroft Indicating Pressure Gauge, 0 to 180#	1	.....	.....	8 39
B-206 C-16	6″ U. S. Indicating Pressure Gauge, Gauge, 0 to 160#	1	.....	.....	8 39
B-206 C-14	9″ Straight Thermometer, 80 degrees to 260 degrees	1	.....	.....	19 33
B-204 C-2	Radial Brick Stack, octagonal base, 6′ dia. 125′ high	1	.....	.....	4,400 00
D-70	Stack Foundation	.....	.....	.....	3,145 47
B-240 C-7	Pump, Worthington Duplex 7½″ x 4½″ x 6″ (Boiler Feed)	1	.....	.....	210 50
D-77	Foundation	.....	.....	.....	25 53
	Carried forward				$48,346 75
[fol. 3917]	Brought forward				$48,346 75
B-209 C-7	Hand Drip Pump in holder yard	10	.....	10 70	107 00
B-206 C-7	Pump, duplex Davidson, 9″ x 6″ x 12″ x 12″ tandem water cylinders (Boiler feed)	1	.....	.....	627 00
D-74	Foundation	.....	.....	.....	37 49
A-240 C-8	Steel Boiler Blow-off Tank 3′ dia. x 10′ long	1	.....	.....	196 00
D-69	Foundation	.....	.....	.....	12 62

Building: Boiler Room—Apparatus:—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
B-208 C-17	1/12 cu. ft. Wet Meter	.....	.....	.....	80 00
B-208 C-18	Double Dry Governor	.....	.....	.....	8 00
	Total				$49,414 86

[fol. 3918] Building: Engine Room—Apparatus:

B-200 C-11	Gas Exhauster, P. H. and F. M. Roots, size 12, complete with engines. Direct connected to Single Cylinder Vertical Steam Engine Buckeye Eng. Co., 17" x 24" equipped with McCord Oil Lubricators and Revolution Counter	2	.....	14,959 78	$29,919 56
D-75	Foundation	.....	.....	.....	7,975 35
B-200 C-10	36" Special, balance governor	3	.....	2,932 50	8,797 50
B-200 C-10	24" Special, balance governor	1	.....	.....	1,567 50
B-201 C-9	Gauge Board, Marble, 10' 6" x 5' 6" front, 4' 0" x 3' 0" side, with 14" shelf, complete with steel and pipe supports, piping, fittings, etc.	1	.....	.....	658 30

B-202 C-16	12″ Cros by Indicating Pressure Gauge, 0 to 300#	1	.....	.....	24 00
B-202 C-13	12″ Foxboro Recording Pressure Gauge	2	.....	44 40	88 80
B-202 C-16	Arch Gauge American Meter Co., 0 to 12″ of Water	4	.....	73 50	294 00
B-202 C-16	6″ U-Gauges	4	.....	5 85	23 40
B-244 C-12	Sturtevant Gas Blower, size 10, design 5 Direct connected to 235 H. P. Sturtevant Turbine	2	.....	6,077 41	12,154 82
D-76	Platform, supports, and foundation	.....	.....	.....	2,907 34
	Carried forward				$64,410 57
[fol. 3919]	Brought forward				$64,410 57
B-202 C-14	8″ Foxboro Indicating Thermometer 0 to 120°	2	.....	36 50	73 00
B-203 C-15	Kennedy Telemetric Gauge Indicator	2	.....	119 00	238 00
B-203 C-16	30″ U Gauge	1	.....	.....	23 05
B-203 C-16	20″ U Gauge	1	.....	.....	16 85
B-203 C-16	4″ Mercury U Gauge	2	.....	5 16	10 32
	Total				$64,771 79

[fol. 3920] Building: Commercial Holders—Apparatus:

Item	Material	Quantity	Unit	Unit price	Total cost
C-116	5 Lift Holder, in steel tank 190′ 10″ dia. x 41′ deep. Capacity 5,000,000 cu. ft.	2	.....	383,022	$766,044.00
D-73	Foundation, Holder, #1	.....	.....	.....	157,093.88
D-79	Foundation, Holder #2	.....	.....	.....	113,569.19
	Total				$1,036,707.07

[fol. 3921] 62nd Street Holder Station

Building: General Connections:

Gas Pipe

Item	Material	Quantity	Unit	Unit price	Total cost
G–4	8″ C. I. B. & S.	150	lin. ft.	3.01	$451.50
"	24″ " "	25	"	12.29	307.25
"	30″ " "	22	"	15.90	349.80
"	30″ " Flanged	15	"	19.15	287.25
"	36″ " "	48	"	24.23	1,163.04
"	36″ Riveted Steel	57	"	9.05	515.85
"	48″ " "	99	"	11.05	1,093.95
	Total	416	.....	.....	$4,168.64

Gas Pipe Fittings

X–128	24" C. I. B. & S.	3,999	lbs.	.1038	$415.10
"	30" " "	5,764	"	.1136	654.79
"	36" " "	37,764	"	.1198	4,524.13
"	24" " Flanged	7,068	"	.1139	805.05
"	30" " "	16,337	"	.1232	2,012.72
"	36" " "	127,885	"	.1258	16,087.93
"	48" " "	20,234	"	.1287	2,604.12
"	36" Steel "	4,534	"	.1450	657.43
"	48" " "	45,404	"	.1340	6,084.14
	Total	268,989	.....	.....	$33,845.41

Valves

G–1	10" O. S. Gate Valve	2	each	96.22	$192.44
"	24" " " "	6	"	267.84	1,607.04
"	30" " " "	8	"	413.00	3,304.00
"	36" " " "	22	"	569.77	12,534.94
"	48" " " "	6	"	1,307.00	7,842.00
"	30" I. S. " "	1	"	351.50	351.50
"	36" " " "	7	"	486.37	3,404.59
"	48" " " "	1	"	1,124.00	1,124.00
	Total	53	.....	.....	$30,360.51

Building: General Connections:—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
G-1	Floor Stands	28	.....	38.00	1,064.00
"	Floor Stands with Bevel Gears	12	.....	54.00	648.00
	Total	40	.....	.....	$1,712.00

[fol. 3922] Summary:

Gas Pipe	416	lin. ft.	.....	$4,168.64
Gas Pipe Fittings	268,989	Lbs.	.....	33,845.41
Valves	53	.....	.....	30,360.51
Floor Stands	40	.....	.....	1,712.00
Total				$70,086.56

[fol. 3923] Building: Small Piping:

Standard Steel Pipe

E-1-9	¼" Diameter	58	lin. ft.	.27	$15.66
"	⅜" "	126	"	.27	34.02
"	½" "	83	"	.30	24.90
"	¾" "	831	"	.37	307.47
X-119	1" "	687	"	.51	350.37
E-1-9	1¼" "	492	"	.73	359.16
"	1½" "	791	"	.88	696.08

"	2"	"	1,802	"	1.13	2,036.26
"	2½"	"	65	"	1.81	117.65
X-119	3"	"	1,556	"	2.07	3,220.92
E-1-9	3½"	"	1	"	2.64	2.64
X-119	4"	"	387	"	2.91	1,126.17
E-1-9	5"	"	9	"	3.92	35.28
X-119	6"	"	172	"	5.40	928.80
E-1-9	8"	"	170	"	7.19	1,222.30
X-119	10"	"	149	"	9.59	1,428.91
		Total	7,379	"	.....	$11,906.59
		Standard Galv. Pipe				
E-2	½"	Diameter	39	Lin ft.	$.34	$13.26
"	¾"	"	2	"	.42	.84
"	2"	"	160	"	1.28	204.80
"	3"	"	3	"	2.38	7.14
		Total	204	"	.....	$226.04
		Extra Heavy Galv. Pipe				
E-2	2½"	Diameter	93	Lin. ft.	$2.39	$222.27
"	4"	"	18	"	4.22	75.96
"	5"	"	62	"	5.87	363.94
		Total	173	"	.....	$662.17

Building: General Connections:—Continued

Item	Material	Quantity	Unit	Unit price	Total cost
[fol. 3924]	**Trenching**				
E–9	¾″ to 4″ Pipe	1,429	Lin. ft.	$.42	$600.18
"	8″ "	150	"	.52	78.00
	Total	1,579	.....	.....	$678.18
	Pipe Covering				
E–4–5–8	½″ diameter (Asbestos)	7	Lin. ft.	$.32	$2.24
	1″ " "	202	"	.36	72.72
	1¼″ " "	153	"	.40	61.20
	1½″ " "	389	"	.42	163.38
	2″ " "	401	"	.44	176.44
	2½″ " "	72	"	.50	36.00
	3″ " "	647	"	.54	349.38
	4″ " "	106	"	.70	74.20
	5″ " "	52	"	.80	41.60
	6″ " "	98	"	.90	88.20
	8″ " "	94	"	1.18	110.92
	10″ " "	21	"	1.40	29.40
E–4–5	¼″ " Hair Felt	56	"	.38	21.28
	½″ " "	25	"	.40	10.00
	¾″ " "	296	"	.42	124.32

1"	"	"	.....	208	"	.44	91.52
1¼"	"	"	.....	60	"	.47	28.20
2"	"	"	.....	701	"	.54	378.54
	Total		.....	3,588	"	.....	$1,859.54

Summary:

Standard Steel Pipe	.....	7,379	Lin. ft.	.....	$11,906.59
Standard Galv. Pipe	.....	204	"	.....	226.04
Extra Heavy Galv. Pipe	.....	173	"	.....	662.17
Trenching	.....	1,579	"	.....	678.18
Pipe Covering	.....	3,588	"	.....	1,859.54
Total	.....				$15,332.52

[fol. 3925] Value of the 48" and 60" Mains in Long Island City and Astoria Property of the East River Gas Co. as of June 1st, 1923

48" and 60" Mains as appraised by Mr. Colin C. Simpson		$1,064,464
Organization & Development prior to Construction (101, G-102)		70,000
Cost of Financing		74,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)		138,380
Interest during Construction (G285)		109,833
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)		30,071
Total		$1,486,748
Of the above amount, 56.445902% is devoted to uses of The Consolidated Gas Co. of New York	$839,208 32	

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3926] Value of the Astoria Tunnel and the Ravenswood Tunnel of the East River Gas Co. as of June 1st, 1923

Land as appraised by Mr. Robert Huntley (G110)	$80,830
Tunnel Head Houses and Appurtenances as appraised by Mr. Henry R. Burt (221, 239, G145)	192,479
Ravenswood Tunnel, as appraised by Mr. J. V. Davies	893,444
Equipment of Ravenswood Tunnel, as appraised by Mr. Colin C. Simpson (231, 239)	195,145
Astoria Tunnel, as appraised by Mr. J. V. Davies	8,750,676
Equipment of Astoria Tunnel, as appraised by Mr. Colin C. Simpson (231, 239)	1,121,741

Organization and Development prior to Construction (101, G102)	735,000
Cost of Financing	773,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	292,659
Interest during Construction (G285)	2,017,440
Taxes during Construction (G284)	149,158
Administrative, Legal and Misc. General Expense during Construction (G282, G286)	286,154
Total	$15,487,726
Of the above amount, 56.445902% is devoted to the uses of The Consolidated Gas Co. of New York	$8,742,186 64

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3927] PLAINTIFF'S EXHIBIT No. 870

Expenditures Necessary to Put The East 62nd St. Holder Station of The Standard Gas Light Co. in the Condition It Was When New

[fol. 3928] Standard Gas Co.—East 62nd St. Holder Station

Boiler Room:

Pump—Duplex Davidson 9″ x 6″ x 12″ x 12″—1. Tandem Water Cylinders:

Replace 2 pins & 2 bushings	$14.76	
Repack water glands	7.73	
Replace 3 ¼″ pet cocks	1.20	
		$23.69

Pump,—Worthington Duplex—1

7½" x 4½" x 6":

Replace 1 valve connecting link.	8.34	
Replace 2 bolts	4.92	
Replace 1 cross shaft	8.34	
		21.60

B. & W. Water Tube Boilers—4 100 Tubes, 4" dia. x 16' 0" long including Vulcan Soot Blowers:

Works No. 1:

Point up brickwork with high tempite.	$21.00	
Repair combustion controller	11.68	
Replace 3 try-cocks & 2 shut-off valves on Water Column.	2.10	
		34.78

Works Nos. 2 & 3:

Point up brickwork with high tempite.	21.00	
Lay 25 bricks	1.44	
Overhaul Combustion Controllers—2	11.68	
Replace 6 try-cocks & 4 shut-off valves.	4.20	
Reline portion of furnace wall Wks. #2	287.72	
Repair safety valves Works No. 3	2.92	
Replace portion of furnace wall Wks. No. 3	143.86	
		472.82

Works No. 4:

Point up brickwork with high tempite.	21.00	
Repair safety valve.	2.92	
	23.92	
		531.52

Turbo-Blower, Sturtevant—1 Type

T. U.—1, #3,800 R. P. M.:

Overhaul	11.68	
Replace Fan	30.00	
		41.68

Pipe Covering: 68 ft. of Std. Magnesia Pipe Covering with Canvas 97.22

[fol. 3929] Pipe Repairs, piping:

Repack 5 valves: Replace 1 pipe gasket & 10′ of pipe	$15.35	
		$731.06

Engine Room:

Pipe Repairs, Large Piping: Repair 2 B. S. Joints 17.82

Miscellaneous:

General Inspection of Running Machinery, Gauges, etc. 500.00

Total $1,248.88

[fol. 3930] Detail Expenditures Necessary to put the East 62nd St. Boiler Governor House of The Standard Gas Co. in the Condition it was When New

[fol. 3931] Boiler Room:

Pump Duplex Davidson 9" x 6" x 12"—1 Tandem Water Cylinders:			
Replace 2 pins & bushings.			
2 pins @ $1.00 each	$2 00		
2 bushings @ $2.00 each	4 00		
6 hours Machinist & Helper	8 76		
		$14 76	
Repack Water Glands.			
Material	1 89		
4 hours Machinist & Helper	5 84		
		7 73	
Replace 3—¼" pet cocks.			
Cocks @ $.40 each		1 20	
			$23 69
Pump —Worthington Duplex.—1 7½" x 4½" 6":			
Replace 1 valve connecting link.			
Material	2 50		
4 hours Machinist & Helper	5 84		
		8 34	

Replace 2 bolts:

2 bolts @ $1.00 each	2.00		
2 hours machinist & helper	2.92		
		4.92	

Replace 1 cross shaft.

Material	2.00		
4 hours Machinist & Helper	5.84		
		8.34	
			21.60

B. & W. Water Tube Boilers.—4 100 Tubes 4" dia. x 16' 0" long including Vulcan Soot Blowers:

Works No. 1:

Point up brickwork with high tempite.			
200# @ $.055 per #	$11.00		
Mason 1 day	10.00		
		21.00	
Repair combusion controller 8 hrs. Mach. & Helper		11.68	
Replace 3 try-cocks & 2 shut-off valves on Water Column		2.10	
		34.78	

Detail Expenditures—Continued

Works Nos. 2 & 3:

Point up brickwork with high tempite.

200# @ $.055 per #	11.00	
Mason 1 day	10.00	
		21.00

[fol. 3932]

Lay 25 bricks 25 @ $57.50 per M		$1.44
Overhaul Combustion Controllers.—2. 8 hours Machinist & Helper		11.68
Replace 6 try-cocks & 4 shut-off valves		4.20
Reline portion of furnace wall Works Nc. 2.		
(6 x 2.17)x 1 equals 13.02 cu. ft.		
2 (7 x 3.33) x 1 equals 46.62 cu. ft.		
(6 x 3.67) x 1 equals 22.02 cu. ft.		
81.66 cu. ft.		
81.66 x 21 bricks per cu. ft. x $167.78 per M		287.72
Repair Safety Valve Cocks #3 2 hours Mach. & Helper		2.92
Replace portion of furnace wall Works No. 3 40.83 cu. ft. x 21 x 167.78		143.86
		$472.82

Works No. 4:

Point up brickwork with high tempite.

600# @ $.055 per #	11 00		
Mason 1 day	10 00		
		21 00	
Repair safety valve 2 hours Mach. & Helper		2 92	
			23 92
			$531 52

Turbo-Blower—Sturtevant—1. Type T. U-1, 3800 R. P. M.:

Overhaul. 16 hours Machinist & Helper	11 68	
Replace Fan	30 00	
		41 68

[fol. 3933]

Pipe Covering:

25′ 0″ of 1¼″ Std. Magnesia Pipe Covering with Canvas @ $ 65	$16 25
7′ 6″ of 1½″ Std. Magnesia Pipe Covering with Canvas @ $.69	51 75
22′ 0″ of 2″ Std. Magnesia Pipe Covering with Canvas @ $.73	16 06

Detail Expenditures—Continued

10′ 0″ of 2½″ Std. Magnesia Pipe Covering with Canvas @ $.80		8.00	
4′ 0″ of 6″ Std. Magnesia Pipe Covering with Canvas @ $1.29		5.16	
			$97.22
Pipe Repairs, Small Piping:			
Repack 2—¾″ valves	.64		
Repack 2—1¼″ valves	.64		
Repack 1—8″ valve	1.00		
		2.28	
Replace 1—10″ pipe gasket		1.16	
Replace 10′ 0″ of 3″ pipe		11.91	
			15.35
			$731.06
Engine Room:			
Pipe Repairs, Large Piping: Repair 2—36″ B. S. Joints			17.82
Miscellaneous:			
General inspection of running machinery gauges etc.			500.00
Total			$1,248.88

[fol. 3934] PLAINTIFF'S EXHIBIT No. 871

Value of the Property of The Consolidated Gas Company of New York Jointly Used with Its Affiliated Companies in Its Gas Business as of June 1st, 1923

[fol. 3935] Value of the 48" Transfer Main of the Consolidated Gas Co. of New York as of June 1st, 1923

Street Mains as appraised by Mr. Colin C. Simpson (231)	$1,556,588
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	202,356
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G284)	43,974
Organization and Development prior to Construction (G101 and G102)	100,000
Cost of Financing	105,000
Interest during Construction (G285)	160,233
	$2,168,151
Of the above amount, 30.88% is devoted to uses of companies other than The Consolidated Gas Co. of New York	$669,525 03

No allowance has been made in the above for the value of the easement, franchise, going value or any other property not specifically mentioned.

[fol. 3936] Value of the 48" Connecting Main of the Consolidated Gas Co. Between the Ravenswood Tunnel and the Astoria Tunnel as of June 1st, 1923

48" Main as appraised by Mr. Colin C. Simpson (231)	$1,471,190
Organization and Development prior to Construction (101 and G102)	97,000
Cost of Financing	102,000
Engineering, Superintendence and General Contractor's Expense and Profit (281)	191,255

Interest during Construction (G285)	151,840
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	41,561
Total	$2,054,846

Of the above amount, 43.554098% is devoted to the uses of companies other than The Consolidated Gas Co. of New York $894,969 64

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3937] Value of the 36" Distributing Mains in the Bronx of the Consolidated Gas Co. of New York as of June 1st, 1923

36" Mains as appraised by Mr. Colin C. Simpson (231)	$658,487 00
Engineering, Superintendence, and General Contractor's Expense and Profit (G281)	85,603 00
Administrative, Legal and Miscellaneous General Expenses during Construction (G282, G283, and G286)	18,602 00
Organization and Development prior to Construction (G101, G102)	43,500 00
Cost of Financing	46,000 00
Interest During Construction (G285)	67,975 00
	$920,167 00

Of the above amount 100% is devoted to the uses of companies other than the Consolidated Gas Company of New York $920,167 00

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3938] Value of the 10,000,000 Cubic Foot Holder & Accessories and Land at the Kingsbridge Holder Station of the Consolidated Gas Company of New York as of June 1st, 1923

Land as appraised by Mr. Robert Huntley (G110)	$265,000
Buildings as appraised by Mr. Henry R. Burt (221)	218,061
Holder and Accessories (Other than land and Buildings) (G121, G122a, G122c, 221, 222, G141a, G141b, G143b, G145, G143a, 224, 225, 238)	1,125,122
Omissions and Contingencies	56,256
Engineering, Superintendence, and General Contractor's Expense and Profit (G281)	181,927
Administrative, Legal and Miscellaneous General Expenses During Construction (G282, G283 and G286)	39,534
Organization and Development prior to Construction (101 & G102)	110,000
Cost of Financing	116,000
Interest during Construction (G285)	189,672
Taxes on Land During Construction (G284)	17,837
Total	$2,319,409
Of the above amount 50% is devoted to uses of companies other than The Consolidated Gas Co. of New York	$1,159,704 50

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3939] Value of the Small Mains in the Bronx of the Consolidated Gas Co. of New York as of June 1st, 1923

Street Mains as appraised by Mr. Colin C. Simpson (231)	$104,270
Engineer, Superintendenmee, and General Contractor's Expense and Profit (G281)	13,555

Administrative, Legal and Miscellaneous General Expenses during Construction (G282, G283 and G286)	2,946
Organization and Development prior to Construction (101 and G102)	6,900
Cost of Financing	7,280
Interest during Construction (G285)	10,766
Total	$145,687
Of the above amount 100% is devoted to the uses of companies other than The Consolidated Gas Company of New York	$145,687

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3940] PLAINTIFF'S EXHIBIT No. 872

Value of the Property of the Consolidated Gas Company of New York Jointly Used With Its Affiliated Companies In Its Gas Business as of June 1st, 1923

[fol. 3941] Value of the 48" Transfer Main of The Consolidated Gas Co. of New York as of June 1st, 1923

Street Mains as appraised by Mr. Colin C. Simpson (231)	$1,556,588
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	202,356
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	43,974
Organization and Development prior to Construction (G101 and G102)	100,000
Cost of Financing	105,000
Interest during Construction (G285)	160,233
	$2,168,151

Of the above amount 30.88% is devoted to uses of Companies other than The Consolidated Gas Co. of New York	$669,525.03

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3942] Value of the 48" Connection Main of The Consolidated Gas Co. Between the Ravenswood Tunnel and the Astoria Tunnel as of June 1st, 1923

48" Main as appraised by Mr. Colin C. Simpson (231)	$1,471,190
Organization and Development prior to Construction (101 & G102)	97,000
Cost of Financing	102,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	191,255
Interest during Construction (G285)	151,840
Administrative, Legal and Misc. General Expense during Construction (G282, G283, and G286)	41,561
Total	$2,054,846

Of the above amount 43.554098% is devoted to the uses of Companies other than The Consolidated Gas Co. of New York	$894,969.64

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3943] Value of the 36" Distributing Mains in the Bronx of The Consolidated Gas Co. of New York as of June 1st, 1923

36" Mains as appraised by Mr. Colin C. Simpson (231)	$658,487.00
Engineering, Superintendence, and General Contractor's Expense and Profit (G281)	85,603.00

Administrative, Legal and Miscellaneous General Expenses during Construction (G282, G283 and G286)	18,602.00
Organization and Development prior to Construction (101 and G102)	43,500.00
Cost of Financing	46,000.00
Interest during Construction (G285)	67,975.00
Total	$920,167.00

Of the above amount 100% is devoted to the uses of Companies other than The Consolidated Gas Company of New York	$920,167.00

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3944] Value of the 10,000,000 Cubic Foot Holder & Accessories and Land at the Kingsbridge Holder Station of the Consolidated Gas Company of New York as of June 1st, 1923

Land as appraised by Mr. F. K. Stevens (G110)	$230,000
Buildings as appraised by Mr. Henry. R. Burt (221)	218,061
Holder and Accessories (Other than land and buildings (G121, G122a, G122c, 221, 222, G141a, G141b, G143b, G145, G143a, 224, 225, 238)	1,125,122
Omissions and Contingencies	56,256
Engineering, Superintendence and General Contractor's Expense and Profit (281)	181,927
Administrative, Legal and Miscellaneous General Expenses during Construction (G282, G283, and G286)	39,534
Organization and Development prior to Construction (101 & G102)	109,000
Cost of Financing	115,000
Interest during Construction (G285)	187,112
Taxes on Land during Construction (284)	17,837
Total	$2,299,849

Of the above amount, 50% is devoted to uses of companies other than The Consolidated Gas Co. of New York	$1,149,924 00

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3945] Value of the small mains in the Bronx of the Consolidated Gas Co. of New York as of June 1st, 1923.

Street Mains as appraised by Mr. Colin C. Simpson (231)	104,270
Engineering, Superintendence, and General Contractor's Expense and Profit (G281)	13,555
Administrative, Legal and Miscellaneous General Expenses during Construction (G282, G283, and G286)	2,946
Organization and Development prior to Construction (101 & G102)	6,900
Cost of Financing	7,250
Interest during Construction (G285)	10,766
Total	$145,687
Of the above amount 100% is devoted to the uses of the companies other than The Consolidated Gas Company of New York	$145,687

No allowance has been made in the above for the value of the easement, franchise, going value, or any other property not specifically mentioned.

[fol. 3946] PLAINTIFF'S EXHIBIT No. 873X

Plaintiff's Exhibit 873 Corrected

Value of the Property Used by The Consolidated Gas Company of New York in its Gas Business as of June 1st, 1923

Property of Affiliated Gas Companies Used by The Consolidated Gas Company of New York:

Astoria Light, Heat & Power Co.	$37,539,809 82	
48" Harlem River Main	266,209 03	
62nd Street Boiler and Governor House	121,413 67	
48" and 60" Mains in Long Island City	839,208 32	
Astoria and Ravenswood Tunnels	8,742,186 64	
		$47,508,827 48

Property of Consolidated Gas Company of New York Used by Affiliated Companies:

48" Transfer Main	$669,525 03	
48" Connecting Main	894,969 64	
36" Distributing Mains	920,167 00	
10,000,000 cu. ft. Holder and Acessories at Kingsbridge	1,159,704 50	
Small Mains in Bronx	145,687 00	
		$3,790,053 17
		$43,718,774 31

Value of the Property of The Consolidated Gas Co. used in its Gas Business, as of June 1st, 1923	$147,434,251 00
The appraisal of Land by Mr. Robert Huntley was used in the above values	$191,153,025 31

[fol. 3947] PLAINTIFF'S EXHIBIT No. 874X

Plaintiff's Exhibit 874 Corrected

Value of the Property Used by the Consolidated Gas Company of New York in Its Gas Business as of June 1st, 1923

Property of Affiliated Gas Companies Used by the Consolidated Gas Company of New York:

Astoria Light, Heat & Power Co.	$36,651,706 04	
48" Harlem River Main	266,209 03	
62nd Street Boiler and Governor House	121,413 67	
48" and 60" Mains in Long Island City	839,208 32	
Astoria and Ravenswood Tunnels	8,730,393 96	
		$46,608,931 02

Property of the Consolidated Gas Company of New York Used by Affiliated Companies:

48" Transfer Main	$669,525 03	
48" Connecting Main	894,969 64	
36" Distributing Mains	920,167 00	
10,000,000 cu. ft. Holder and Accessories at Kingsbridge	1,149,924 00	
Small Mains in Bronx	145,687 00	
		$3,780,272 67
		$42,828,658 35
Value of the Property of The Consolidated Gas Co. of New York used in the Gas Business, as of June 1st, 1923		147,027,062 00
		$189,855,720 35

The appraisal of Land by Mr. F. K. Stevens was used in the above values.

[fol. 3948] PLAINTIFF'S EXHIBIT No. 875

Astoria Light, Heat & Power Co.

Statement Showing Buildings Appraised by Mr. H. R. Burt, but not Included by Colonel Miller in His Inventory and Appraisal of Property Used in Gas Business as of June 1st, 1923

Total cost of Buildings inventoried and appraised by Mr. Burt, as of June 1st, 1923, as shown by Exhibit No. 858			$5,930,470 31
Cost of Buildings and Appurtenances included in above figures, but eliminated by Colonel Miller in preparing his Inventory and Appraisal of Property Used (Exhibit Nos. 866 and 866-A) and taken as a basis in subsequent computations and summaries (Exhibit Nos. 871-74):			
Z-24	Toluol Pump House	$3,676 45	
Z-25	Toluol House	3,658 19	
X-M	Brick, Stone and Frame House	21,202 50	
X-P	Frame Stables and Sheds	2,720 64	
X-T	Residence	26,828 40	
X-U	Brick Stable	7,095 67	
X-V	Gardener's Dwelling	2,668 63	
	Chicken House #102	450 34	
	Temp. Transformer House #140	166 08	
	Laboratory #141	561 45	
	Chicken House #142	1,110 18	
			70,138 53
Cost of Buildings and Appurtenances of The Astoria Light, Heat & Power Co., as appraised by Mr. H. R. Burt, as of June 1st, 1923, and included by Colonel Miller in Exhibit- Nos. 866, 866-A, 871-74			$5,860,331 78

[fol. 3949] PLAINTIFF'S EXHIBIT No. 876

The Consolidated Gas Company of New York

Statement Showing Buildings Appraised by Mr. H. R. Burt, but not Included by Colonel Miller in His Inventory and Appraisal of Property Used in Gas Business as of June 1st, 1923.

Total cost of Buildings inventoried and appraised by Mr. Burt, as of June 1st, 1923, as shown by Exhibit- Nos. 838, 838-A		$12,356,921 35
Cost of Buildings and Appurtenances included in above figures, but eliminated by Colonel Miller in preparing his Inventory and Appraisal of Property used (Exhibit Nos. 856 and 856-A) and taken as a basis in subsequent computations and summaries (Exhibit Nos. 863-64, 871-74):		
General Office Bldg.—		
$5,469,220 30—61.8%	3,379,978.15	
General Office Annex—		
52,952.03—61.8%	32,724.35	
West 131st St. Emergency Station—		
6,608.91—100%	6,608.91	
		$3,419,311 41
Cost of Buildings and Appurtenances of The Consolidated Gas Co., as appraised by Mr. H. R. Burt, as of June 1st, 1923, and included by Colonel Miller in Exhibit Nos. 856, 856-A, 863-64, 871-74		$8,937,609 94

[fol. 3950] PLAINTIFF'S EXHIBIT No. 877

The Consolidated Gas Company of New York

Statement Showing Value of Land Testified to by Mr. Robert Huntley, but not Included by Colonel Miller in His Inventory and Appraisal of Property Used in the Gas Business as of June 1st, 1923

Total Value of Land Owned by The Consolidated Gas Company, as of June 1st, 1923, as testified to by Mr. Robert Huntley	$14,282,055
Value of Land Included in the above Figure but eliminated by Colonel Miller in Preparing His Inventory and Appraisal of Property Used (Ex. No. 856) and taken as a Basis in subsequent computations and summaries (Ex. Nos. 863, 871): Block 870, Lots 60 and 47: $522,500, @ 61.8 per cent	322,905
Value of Land of the Consolidated Gas Co. as Testified to by Mr. Robert Huntley and Included in Exhibits above specified	$13,959,150

[fol. 3951] PLAINTIFF'S EXHIBIT No. 878

The Consolidated Gas Company of New York

Statement Showing Derivation of and Items Eliminated from the Valuation of Land of the Consolidated Gas Company as of June 1st, 1923, as Shown in Exhibits No. 856-A et seq.

Land Appraised by Mr. F. K. Stevens as Owned by The Consolidated Gas Co., as of June 1st, 1923, and Included by Colonel Miller in His Inventory and Appraisal of Property Used (Ex. No. 856-A) and taken as a Basis in Subsequent Computations and Summaries (Ex. Nos. 864, 872, 874), (Parcels not Appraised by Mr. Stevens Being Blocks 982, Lot 13,988, Lot 1; 991, Lots 1 and 47; 1089, Lot 1; 1107, Lot 7)	$10,061,070
Land Appraised by Mr. Stevens but not Included by Colonel Miller in His Inventory and Appraisal of Property used (Ex. 856-A) and taken as a Basis in Subsequent Computations and Summaries (Ex. Nos. 864, 872, 874)	315,180
Total Value of the Land Appraised by Mr. Stevens	$10,376,250
Land Appraised by Mr. F. K. Stevens as Owned by The Consolidated Gas Co. as of June 1st, 1923, and Included by Colonel Miller in Exhibits as above stated	$10,061,070

Land Owned and Used by The Consolidated Gas Co., as of June 1st, 1923, and Not Testified to by Mr. Stevens; therefore included by Colonel Miller, in the above stated Exhibits, at the Figures Testified to by Mr. Robert Huntley, viz:

Block 982—Lot 13		$437,500	
" 988— " 1		680,000	
" 991— " 1		361,755	
" 991— " 47		67,800	
" 1089— " 1		2,000,000	
" 1107— " 7			
			$3,547,055
Value of Land as Shown by Colonel Miller in above-stated Exhibits			$13,608,125

(Here follow Plaintiff's Exhibit No. 883, marked side folio pages 3952 and 3953, 3954, 3955, and three sheets of Plaintiff's Exhibit No. 884, marked side folio pages 3956 and 3957, 3958, and 3959.)

PLAINTIFF'S EXHIBIT NO. 883

CONSOLIDATED GAS COMPANY OF NEW YORK
NET ADDITIONS TO FIXED CAPITAL, BASED ON ORIGINAL COST
APPLICABLE TO THE GAS BUSINESS OF THE COMPANY
DURING THE PERIOD FROM JUNE 1, 1923 TO DECEMBER 31, 1923

	Additions	Withdrawals	Net Additions
Real Estate - per Schedule 1	$2,301,154.50	$1,937,548.41	$ 363,606.09
Plant - per Schedule 2	1,156,990.08	645,945.82	511,044.53
Mains - per Exhibits 695, 822	42,188.45 ✓	15,406.25	26,782.20
Services - per Exhibits 695, 822	80,617.59 ✓	30,278.44	50,339.15
Meters - per Exhibit 823	150,552.80	65,287.22	85,265.58
Cocks & Connections - per Exhibit 823	12,221.07	2,141.51	10,079.56
Furniture & Fixtures- " " 823	3,486.70 ✓	1,074.39	2,412.31
Horses Wagons & Harness-Per " 823		1,366.15	1,366.15
Tools & Implements - Per " 823	42,746.75 ✓	35,207.82	7,538.93
Gas Appliances Rented-Per " 823	179,122.80 ✓	24,099.32	155,023.56
Automobiles & Accessories-Per " 823	41,660.29 ✓	23,480.41	18,179.88
Organization - " " 823	324,203.29	-	324,203.29
Total -	$4,334,944.37	$2,781,834.44	$1,553,109.93

Deduct for change in category of property at 42nd Street Station (Block 1090, Lot 23) included in property used and useful as of June 1, 1923, not claimed in the gas business after October 31, 1923:

Original Cost of Land	$ 60,000.00	
Assessments for Local Improvements	626.40	
Plant located thereon	1,036.00	61,662.40
Net increase in investment in property used and useful in the gas business, per Exhibit 828.		$1,491,447.53

X Denotes Red in Copy.

CONSOLIDATED GAS COMPANY OF NEW YORK
ORIGINAL COST OF NEW ADDITIONS TO REAL ESTATE INCLUDING IMPROVEMENTS THEREON
OTHER THAN MANUFACTURING PLANTS AND HOLDER STATIONS
DURING THE PERIOD FROM JUNE 1, 1923 TO DECEMBER 31, 1932

SCHEDULE 3.

Location	Property used in the Gas Business			Property not claimed in Gas Business			Total, Per Exhibit 829		
	Additions	Withdrawals	Net Additions	Additions	Withdrawals	Net Additions	Additions	Withdrawals	Net Additions
14th Street Station (a)	-	$1,112,866.84	$1,112,866.84 X	-	$ 319,060.00	$319,060.00 X	$ -	$1,432,626.84	$1,432,626.84 X
81st Street Station	3,304.21	-	3,304.21	-	-	-	3,304.21	-	3,304.21
62nd Street Station	-	799,000.00	799,000.00 X	-	-	-	-	799,000.00	799,000.00 X
111th Street Station	1,064.49	-	1,064.49	-	-	-	1,064.49	-	1,064.49
132nd Street Station	27,247.72	-	27,247.72	-	-	-	27,247.72	-	27,247.72
Hunts Point Station	2,265,103.00	-	2,265,103.00	-	-	-	2,265,103.00	-	2,265,103.00
Hester & Elizabeth Sts. (b)	1,740.03	-	1,740.03	-	-	-	1,740.03	-	1,740.03
130 East 15th Street (c)	615.34	-	615.34	$995.49	-	995.49	1,610.83	-	1,610.83
66th St. St. Dept. & Shop	412.15	-	412.15	-	-	-	412.15	-	412.15
E. 132nd St. & Locust Ave.	-	-	-	-	99,451.75	99,451.75 X	-	99,451.75	99,451.75 X
474 West 155th Street	77.90	-	77.90	-	-	-	77.90	-	77.90
Assessments for Local Impts.	1,283.64	35,983.87	33,281.81 X	624.53	7,292.92	6,671.26 X	2,213.89	32,281.08	30,067.17 X
Total -	$2,301,154.58	$1,947,849.61	$ 353,606.09	$1,619.72	$425,811.84	$424,191.32 X	$2,318,774.82	$2,343,359.65	$60,585.43 X

(a) Exclusive of amounts transferred to "18th Street Station" and "17th Street Yard" previously included in "14th Street Station".
(b) Exclusive of adjustment in re items transferred to "17th St. Yard".
(c) Additions to General Office Building distributed on basis of Exhibit 824, 61.80% to Rented Portion.

X Denotes Red in Copy

CONSOLIDATED GAS COMPANY OF NEW YORK
ORIGINAL COPY OF NET ADDITIONS TO MANUFACTURING PLANT AND HOLDER STATIONS
DURING THE PERIOD FROM JUNE 1, 1923 TO DECEMBER 31, 1923.

SCHEDULE 2.

	Property used in the Gas Business			Property not claimed in Gas Business			Totals, or Exhibit 021		
	Additions	Withdrawals	Net Additions	Additions	Withdrawals	Net Additions	Additions	Withdrawals	Net Additions
11th Street Station	$ 37,320.63	$ 1,019.67	$ 36,300.96	$ -	$ -	$ -	$ 37,320.63	$ 1,019.67	$ 36,300.96
14th Street Station (a)	788.01	449,783.96	448,495.95 X	-	91,360.49	91,360.49 X	788.01	540,644.45	539,856.44 X
21st Street Station	982,780.17	106,891.89	875,888.28	-	-	-	982,780.17	106,991.89	875,888.28
42nd Street Station (b)	-	75,050.00	75,050.00 X	-	-	-	-	75,050.00	75,050,00 X
44th Street Station	30.10	-	30.10	-	-	-	30.10	-	30.10
63rd Street Station	26,174.62	12,500.00	13,674.62	-	-	-	26,174.62	12,500.00	13,674.62
68th Street Station	6,599.65	-	6,599.65	-	-	-	6,599.65	-	6,599.65
99th Street Station	29,232.67	1,200.00	28,032.67	-	-	-	29,232.67	1,200.00	28,032.67
111th Street Station	406.51	-	406.51	-	-	-	406.51	-	406.51
132nd Street Station	2,342.37	-	2,342.37	-	-	-	2,342.37	-	2,342.37
Kingsbridge Station	1.34	-	1.34	-	-	-	1.34	-	1.34
Hunts Point Station	36,946.02	-	36,946.02	-	-	-	36,946.02	-	36,946.02
E. 132nd St. Testing Station	-	-	-	-	7,450.00	7,450.00 X	-	7,450.00	7,450.00 X
Engineering & Superintendence (c)	40,997.39	-	40,997.39	35,377.66	-	35,377.66	76,375.05	-	76,375.05
Cash Discounts on Construction Expenditures	6,609.43 X		6,609.43 X				6,609.43 X		6,609.43 X
Total -	$1,156,990.05	$445,945.52	$511,044.53	$35,377.66	$98,810.49	$63,432.83 X	$1,192,367.71	$744,756.01	$447,611.70

(a) Exclusive of amounts transferred to "15th St. Station" and "17th St. Yard" previously included in "14th St. Station".
(b) Exclusive of amount transferred to "Unamortized Investment in 42nd St. Plant".
(c) Amount applicable to Affiliated Companies, billed in 1924, classified to "Non-Gas".

X Denotes Red in Copy

PLAINTIFF'S EXHIBIT NO. 884

CONSOLIDATED GAS COMPANY OF NEW YORK
STATEMENT OF DIFFERENCES IN CLASSIFICATION IN RE OPERATING EXPENSES AND MISCELLANEOUS OPERATING REVENUE FOR THE YEAR 1922, BETWEEN (1) THE FORM BASED ON THE UNIFORM SYSTEM OF ACCOUNTS, USED BY MR. TEELE IN HIS SCHEDULE OF "COST OF PRODUCTION AND DISTRIBUTION, YEAR ENDED DECEMBER 31, 1922", (EXHIBIT NO. 812), AND (2) THE FORM OF ANNUAL REPORT FURNISHED BY THE PUBLIC SERVICE COMMISSION, AS FILED BY THE COMPANY WITH THE COMMISSION FOR THE YEAR ENDED DECEMBER 31, 1922 (EXHIBIT NO. 811).

		Per Teele Schedule (Exhibit No. 812)	Per P. S. C. Report (Exhibit 811) Reference	Amount	Variation	Remarks
COST OF PRODUCTION:						
Generator Fuel - Coal	$742,805.69					
- Coke	466,737.10	$1,208,542.79	P. 55, L. 13	$1,316,212.74	$107,543.95 X	(1)
Boiler Fuel - Coal	82,995.57					
- Coke	76,091.57					
- Water Gas Tar	250,224.67	399,311.11	P. 55, L. 8	412,116.48	12,805.37 X	(2)
Labor, Cartage, etc. handling		120,220.36		-	120,220.36	(3)
Total Fuel -		1,728,269.16		1,728,329.22	129.06 X	(4)
Gas Oil		1,898,900.97	P. 55, L. 14	1,898,900.97	-	
Water		15,964.83	P. 55, L. 9	15,964.83	-	
Iron Bars	12,119.34					
Shavings	1,416.31	13,537.65	P. 55, L. 15	13,537.65	-	
Sundry Supplies		6,663.69		-	6,663.69	(5)
Labor, Cartage handling Spent Material		29,645.13		-	29,645.13	(6)
Residuals Produced	298,233.38 X					
Less Residual Expense	7,718.74	290,514.64 X	P. 55, L. 30 X	290,514.64 X	-	
Gas Making Labor		284,564.80	P. 55, L. 7	284,564.80	-	
Repairs - Water Gas	344,817.06					
- 14th & 42nd St. Stas.	19,258.52	364,075.57	P. 55, L. 17-27	336,057.25	21.68 X	(7)
Misc. Works Expense		84,249.68	P. 55, L. 16	91,370.88	7,121.20 X	(8)
Gas Storage		244,888.38		243,838.82	859.56	(9)
		4,401,975.82	P. 51, L. 10	4,372,073.46	329,874.43	(10)
Gas Purchased						
N. Y. Mutual Gas Light Co.		$272,845.77	P. 51, L. 41	$240,477.44	$32,368.33	(11)
Astoria Light, Heat & Power Co.		6,410,911.68	P. 51, L. 42	6,410,911.68	-	
Standard Gas Light Co.		33,457.51	P. 51, L. 43	33,457.51	-	
New Amsterdam		295,920.56	P. 51, L. 44	295,920.56	-	
Use of Manufacturing Plant						
N. Y. Mutual Gas Light Co.		96,181.69	P. 51, L. 45	96,181.69	-	
Astoria Light, Heat & Power Co.		2,909,289.65	P. 51, L. 46	2,909,289.65	-	
		10,019,306.86	P. 51, L. 12	9,986,938.53	32,368.33	(11)
Total Cost of Production -		14,421,282.78	P. 51, L. 14	14,359,011.99	362,244.76	(12)

X Denotes Red in Copy

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT OF DIFFERENCES IN CLASSIFICATION IN RE OPERATING EXPENSES AND MISCELLANEOUS OPERATING REVENUE FOR THE YEAR 1922, BETWEEN (1) THE FORM BASED ON THE UNIFORM SYSTEM OF ACCOUNTS, USED BY MR. TEELE IN HIS SCHEDULE OF "COST OF PRODUCTION AND DISTRIBUTION, YEAR ENDED DECEMBER 31, 1922". (EXHIBIT NO. 813), AND (2) THE FORM OF ANNUAL REPORT FURNISHED BY THE PUBLIC SERVICE COMMISSION, AS FILED BY THE COMPANY WITH THE COMMISSION FOR THE YEAR ENDED DECEMBER 31, 1922 (EXHIBIT NO. 811).

		Per Teele Schedule (Exhibit 813)	(Per P. S. C. Report (Exhibit 811) Reference	Amount	Variation	Remarks
COST OF DISTRIBUTION:						
Dist. Emptns & Supplies & Exp.		$516,169.86	P.56, L. 3 & 4	$474,930.77	$ 41,239.09	(13)
Meter & Installation Work		418,050.78	P.56, L. 5	418,050.78	-	
Work on Consumers Premises - Misc.	$536,361.93					
" - Gas Supply Insp.	96,096.09	632,458.02	P.56, L. 6	632,458.02	-	
Repairs - Mains		179,405.23	P.56, L. 8	179,405.23	-	
" - Services		103,926.23	P.56, L. 9	103,926.23	-	
" - Meters		668,601.56	P.56, L. 10	668,601.56	-	
" - Distribution Tools		32,907.95	P.56, L. 11	33,907.95	1,000.00 X	(14)
" - Buildings		19,428.10	P.56, L. 13	7,560.58	11,867.52	(15)
" - Gas Appliances		283,557.77	P.56, L. 12	283,557.77	-	
Distribution Supt. Expenses		2,884,506.50	P.51, L. 12	2,832,398.89	52,106.61	(16)
Street Lamp Repairs		924.76	P.51, L. 18	924.76	-	
Commercial Expenses		1,514,098.42	P.57, L. 7	1,500,573.56	13,524.86	(17)
Salaries - General Office	445,771.26					
Supplies & Expenses - G. O.	169,269.40	615,040.66	P.57, L. 9-11	615,329.21	287.57 X	(18)
General Law Expense		128,112.62	P.57, L. 12	128,112.62	-	
Claims & Arrears Expense		28,731.20		-	28,731.20	(19)
Claims for Damages		3,679.78	P.57, L. 18	3,679.78	-	
Insurance		132,830.71	P.57, L. 15	132,830.71	-	
Vacations & Sickness	121,804.53					
Contributions to Mutual Aid Society	57,986.86					
Superannuation	140,215.81	320,009.20	P.57, L. 16	319,924.18	85.02	(20)
Stable & Automobile Expense		279,848.09	P.57, L. 22	286,676.48	6,727.39 X	(21)
Gas Rate Appeal No. 2	30,855.54					
Expenses re P.S.C. Hearings	43,491.65					
Misc. General Expense	193,418.23	267,765.42	P.57, L. 13	267,765.42	-	
General Stationery & Printing		-	P.57, L. 20	22,198.79	22,198.79 X	(22)
Undistributed Adjustments		74,037.62 X	P.57, L. 25 & 26 X	74,037.62 X	-	
Duplicate Gas Charges		75,360.40 X	P.57, L. 27 X	75,360.40 X	-	
Uncollectible Bills		71,029.60	P.51, L. 24	71,029.60	-	
Interest on Consumers Deposits		97,823.80		-	97,823.80	(23)
Use of Distributing System		600,815.08	P.51, L. 28	600,815.08	-	
Repairs, etc., re Rented Property		1,236.36		-	1,236.36	(24)
Municipal Rents		-	P.51, L. 26	31,683.49	31,683.49 X	(25)
Misc. Operating Rents		-	P.51, L. 29	60,360.98	60,360.98 X	(26)
Total Cost of Distribution, etc.		$6,753,933.15		$6,686,683.53	$67,249.62	(27)
Retirement Expense		$730,310.00	P.51, L. 22	$730,310.00	-	
Taxes		1,845,634.40	P.51, L. 28	1,868,940.36	30,235.96 X	(28)
Interest on Unpaid Taxes		129,141.00	- -	-	129,141.00	(29)
TOTAL COST OF PRODUCTION AND DISTRIBUTION		$23,790,291.30	P.51, L. 30	$23,561,871.87	$228,419.43	(30)

X Denotes Red in Copy

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT OF DIFFERENCES IN CLASSIFICATION IN OPERATING EXPENSES AND MISCELLANEOUS OPERATING REVENUE FOR THE YEAR 1922, BETWEEN (1) THE FORM BASED ON THE UNIFORM SYSTEM OF ACCOUNTS, USED BY MR. TEELE IN HIS SCHEDULE OF "COST OF PRODUCTION AND DISTRIBUTION, YEAR ENDED DECEMBER 31, 1922". (EXHIBIT NO. 813), AND (2) THE FORM OF ANNUAL REPORT FURNISHED BY THE PUBLIC SERVICE COMMISSION, AS FILED BY THE COMPANY WITH THE COMMISSION FOR THE YEAR ENDED DECEMBER 31, 1922 (EXHIBIT NO. 811).

	Per Teele Schedule Exhibit No. 813.	Per P. S. C. Report (Exhibit 811) Reference	Amount	Variation	Remarks
MISCELLANEOUS OPERATING REVENUE					
Gross Profit from Sales of Appliances	$296,714.29	P. 52, L. 39	$296,714.29	$	
Rent of Gas Appliances	1,465,979.77	P. 52, L. 38	1,513,820.89	47,841.12 X	(31)
Interest on Bank Balances	47,160.29	-	-	47,160.29	(32)
Rental of Jointly Used Facilities	107,317.45	P. 52, L. 41	298,307.33	190,989.84 X	(33)
Misc. Rent Revenue	44,549.76	P. 52, L. 42	185,627.28	141,077.52 X	(34)
	$1,961,721.56	P. 52, L. 43	$2,294,469.79	$332,748.19	(35)

X Denotes Red in Copy

[fol. 3960] Remarks

(1) Generator Fuel:	
Labor, etc. handling—included in generator fuel in P. S. C. Report and classifier separately by Mr. Teele in Exhibit No. 813	$107,414 89
Water Gas Tar used in generators—included in generator fuel in P. S. C. Report and classified under "Sundry Supplies" by Mr. Teele in Exhibit No. 813	129 06
	$107,543 95
(2) Boiler Fuel:	
Labor, etc., handling—included in boiler fuel in P. S. C. Report and classified separately by Mr. Teele in Exhibit No. 813	$12,805 37
(3) Labor Handling Coal and Coke:	
Classified separately by Mr. Teele in Exhibit No. 813, and included with fuel in P. S. C. Report:	
Generator Fuel	$107,414 89
Boiler Fuel	12,805 37
Total	$120,220 26
(4) Total Fuel:	
Water Gas Tar used in generators—included in Generator Fuel in P. S. C. Report, and classified to "Sundry Supplies" by Mr. Teele in Exhibit No. 813	$129 06

(5) Sundry Supplies:

This account is a subdivision of "Misc. Works Expense," which is set forth separately by Mr. Teele in Exhibit No. 813, but included in "Misc. Works Expense" in P. S. C. Report, and includes:	
Sundry Supplies included in P. S. C. Report in "Misc. Works Expense"	$6,534 63
Water Gas Tar used in generators included in "Generator Fuel" in P. S. C. Report	129 06
[fol. 3961]	
Total per Exhibit No. 813	$6,663 69

(6) Labor and Cartage Handling Spent Material:

This account is a subdivision of "Misc. Works Expense," which is included in Misc. Works Expense" in P. S. C. Report, and classified separately by Mr. Teele in Exhibit No. 813	$29,645 13

(7) Repairs:

Item of "Repairs Works & Station Structures —Inwood Station" excluded by Mr. Teele in Exhibit No. 813 as not applicable to gas operations	$21 68

(8) Misc. Works Expense:

Items included in P. S. C. Report, but classified separately by Mr. Teele in Exhibit No. 813:	
Sundry Supplies	$6,534 63
Handling Spent Material	29,645 13
Item of "Expense of removing piping from Toluol Plant—21st Street Station, excluded by Mr. Teele as not applicable to gas operations.	1,767 97
Total	37,947 73

Less Rent Expense applicable to Manufacturing Stations included in "Misc. Works Expense" by Mr. Teele in Exhibit No. 813, and reported under separate title in P. S. C. Report		30,826 53
		$7,121 20
(9) Gas Storage:		
Rents classified to "Gas Storage" in Exhibit No. 813, and reported under separate title in P. S. C. Report		$984 00
Less item of "Gas Storage-Inwood Station" excluded by Mr. Teele in Exhibit No. 813, as not applicable to gas operations		124 45
Net Variation		$859 55

[fol. 3962]

(10) Total exclusive of Gas Transferred:		
Rents applicable to Production reported under separate title in P. S. C. Report, and included by Mr. Teele in Exhibit No. 813 in:		
"Misc. Works Expense"		30,826 53
"Gas Storage"		984 00
Total		$31,810 53
Less items excluded from gas operations by Mr. Teele in Exhibit No. 813:		
Repairs Works & Station Structures—Inwood	$21 68	
Gas Storage—Inwood	124 45	
Removal of Toluol Piping—21st St. Station	1,767 97	
		1,914 10
Net Variation		$29,896 43

(11) Gas Purchased:

Gas in Mains and Holders and Gas delivered but not billed purchased from New York Mutual Gas Light Company on August 31, 1922, included in Gas purchased by Mr. Teele in Exhibit No. 813, but classified elsewhere in P. S. C. Report	$32,368 33

(12) Total Cost of Production:

Rents included in Cost of Production in Exhibit No. 813, classified to Rent Expense under General Expenses in P. S. C. Report (for details see No. 10)	$31,810 53
Gas delivered but not billed, purchased from New York Mutual Gas Light Company, included in "Gas Purchased" in Exhibit No. 813, and classified elsewhere in P. S. C. Report	32,368 33
	$64,178 86
Less item excluded from Gas Operations by Teele in Exhibit No, 813 (See #10)	1,914 10
	$62,264 76

(13) Distribution, Superintendence & Supplies & Expenses:

Rent Expense included in Distribution Supplies & Expenses in Exhibit No. 813, classified under separate title in P. S. C. Report	$41,239 09

[fol. 3963] (14) Repairs Distribution Tools:

Variation due to error between "Repairs Distribution Tools" and "Repairs Distribution Buildings" made in P. S. C. Report, the former being understated and the latter overstated by	$1,000 00

(15) Repairs Distribution Buildings:

"Repairs Buildings—Branches" included in this account in Exhibit No. 813, and classified in P. S. C. Report under "Commercial Expenses"	2,140 13
"Repairs Buildings—Stables & Garages" included in this account in Exhibit No. 813, and classified in P. S. C. Report under "Stable Expense"	8,727 39
Repairs classified elsewhere in P. S. C. Report	10,867 52
Plus error in re "Repair Buildings—Branches" offset by contra error in "Repairs Tools" (See #14)	1,000 00
	$11,867 52

(16) Total Distribution Expenses:

Rent Expense classified elsewhere in P. S. C. Report	$41,239 09
Repairs Buildings classified elsewhere in P. S. C. Report (See #15)	10,867 52
Total	$52,106 61

(17) Commercial Expenses:

Rent expense included in this account in Exhibit No. 813, and classified elsewhere in P. S. C. Report	$15,664 99
Less "Repairs Buildings—Branches" classified to this account in P. S. C. Report, and included in "Repairs Distribution Buildings" in Exhibit No. 813 (See #15)	2,140 13
	$13,524 86

2705

[fol. 3964] (18) General Office Salaries and Supplies & Expenses:

"Claims & Arrears Expenses" included in this account in P. S. C. Report and stated separately by Mr. Teele in Exhibit No. 813		$25,731 20
and classified separately in P. S. C. Report:		
Rent Expense	$3,244 84	
Stationery & Printing	22,198 79	
		25,443 63
Net Variation		$287 57

(19) Claims & Arrears Expense:

Set forth as separate item in Exhibit No. 813, and included in General Office Salaries and Supplies & Expenses in P. S. C. Report	$25,731 20

(20) Relief Department & Pensions:

Rents expense classified elsewhere in P. S. C. Report	$85 02

(21) Stable & Automobile Expense:

"Repairs Buildings—Stables & Garages" included by Mr. Teele in "Repairs Distribution Buildings" and included under Stable Expense in P. S. C. Report	$8,727 39

(22) Stationery & Printing:

Included in G. O. Supplies & Expenses by Mr. Teele in Exhibit No. 813, and reported separately in P. S. C. Report	$22,198 79

[fol. 3965]

(23) Interest on Consumers Deposits:

Included in "Miscellaneous Interest Deductions" (Sch. 594, Page 63) in P. S. C. Report	$97,623 80

(24) Repairs, Maintenance, etc., of Rented Property:

Expenses applicable to rent revenue from property used and useful in the gas business, per Exhibit No. 258, representing that portion applicable to gas property of such expenses reported in Schedule 585, page 62 of P. S. C. Report, and deducted therein directly from the rent revenue	$1,236 35

(Mr. Teele has shown the portion of the rent revenue received from property claimed without deduction for expenses, and has included such expenses in this item.)

(25) Municipal Rents	$31,683 49
(26) Misc. Operating Rents	60,360 98
Total	$92,044 47

Rent expense reported under the above headings in the P. S. C. Report, classified to departmental expenses by Mr. Teele in Exhibit No. 813, as follows:

Misc. Works Expense	$30,826 53
Gas Storage	984 00
Distribution Supplies & Expenses	41,239 09
Commercial Expenses	15,664 99
G. O. Supplies & Expenses	3,244 84
Contributions to Mutual Aid Society (Dispensary)	85 02
Total	92,044 47

(27) Total Cost of Distribution:

Interest on Consumers Deposits, included by Mr. Teele in Exhibit No. 813, classified elsewhere in P. S. C. Report	$97,823 80
Expenses applicable to rent revenue from property set forth separately in Exhibit No. 813, and included in the expenses deducted from Rent Revenue in P. S. C. Report	1,236 35
	$99,060 15

Less Rents paid, included in Cost of Distribution in Exhibit No. 813, and reported under separate title in P. S. C. Report, as required by the report form	31,810 53
	$67,249 62

[fol. 3966] (28) Taxes:	Taxes included in Exhibit 814	Operating taxes per P. S. C. report	Variation
Gross Earnings	$134,330.33	$137,417.07	$5,086.74*
Excess Dividend	28,368.23	28,368.23	.....
Real Estate	656,771.32	646,278.43	10,492.89
Real Estate of Corporations	336,308.51	336,156.51	152.00
Special Franchise	352,913.65	353,065.65	152.00*
Personal	228.33	228.33	.....
Federal Capital Stock	44,346.13	44,346.13	.....
Federal Income	312,357.90	350,000.00	37,642.10*
	$1,865,624.40	$1,895,860.35	$30,235.95*

(a) Gross Earnings:

Miscellaneous Operating Revenue applicable to property not claimed in the gas business, excluded by Mr. Teele in Exhibits 813 & 814:		
Misc. Rent Revenue	$447,820 33	
Joint Gas Rent Revenue	169,528 13	
Total	$617,348 46	
Tax @ ½ of 1%		$3,086 74

(b) Real Estate:

Operating Taxes, per P. S. C. Report—page 59, Line 4 & Note	$646,278 43
Misc. Operating Revenue Deductions—Taxes per Note, Page 59	89,655 98
Total Real Estate Taxes, per P. S. C. Report	$735,934 41
Real Estate Taxes included by Mr. Teele	656,771 32
Variation	$79,163 09

[*Red in copy.]

Consisting of Taxes on property not claimed in the gas business in the present suit, as follows:

Block	Lot	
690	40	$371.24
	42	278.43
	43	278.43
	44	278.43
	45	278.43
691	11	6,600.00
870	60	50,568.72
952	33	261.24
	34	261.24
	Forward	$59,176.16
[fol. 3967]	Brought Forward	$59,716.16
978	1	440.00
	2	357.50
	3	357.50
	4	275.00
985	39	206.24
	40	206.24
1092	7	5,214.00
	28	316.24
	38	247.50
	38½	247.50
	39	247.50
1455	13	2,475.00
1474	24	563.74
1683	34	192.50
	35	192.50
2123	48	426.24
	49	275.00
	50	261.24
	51	261.24
2175	15	412.50
	18	660.00
	22	687.50
	100	797.50
	124	137.50

Block	Lot			
2583	360		2,887 50	
2184	1		1,932 00	
		Total Taxes	$79,453 34	
		Less amount capitalized (Assessments)	290 25	$79,163 09

(c) Special Franchise & Real Estate Corporations:

Amounts deducted from above taxes applicable to assessments for local improvements transposed in P. S. C. Report with result that Special Franchise was understated and Real Estate of Corporations tax was overstated by	$152 00

(d) Federal Income:

Estimated tax accrued in 1922 accounts, and reported in P. S. C. Report	$350,000 00
Actual tax as paid in 1923, adopted by Mr. Teele in Exhibits 813 and 814	312,357 90
Variation	$37,642 10

[fol. 3968] (29) Interest on Unpaid Taxes:

Classified elsewhere in P. S. C. Report (Schedule 594, Page 63)	$129,141 00

(30) Total Cost of Production & Distribution:

Items classified to Operating Expenses by Mr. Teele in Exhibit No. 813, classified elsewhere in P. S. C. Report:

Interest on Consumers Deposits	$97,823 80
Interest on Unpaid Taxes	129,141 00

Gas in Holders and in Mains, and gas delivered but not billed, purchased from New York Mutual Gas Light Company, Aug. 31, 1922		32,368.33
Expenses applicable to rent revenue from gas property		1,236.35
Total		$260,569.48
Less items excluded by Mr. Teele in Exhibit No. 813:		
Repairs Works & Station Structures—Inwood	$21.68	
Gas Storage—Inwood	124.45	
Removal of Toluol Piping—21st St. Station	1,767.97	
Taxes applicable to property not claimed, as set forth in Item #28	30,235.95	
		32,150.05
Net Variation		$228,419.43

(31) Rent of Gas Appliances:

Adjustment made in January 1923 applicable to 1922 revenue, applied to 1922 operations by Mr. Teele in Exhibit No. 813, not recorded in 1922 P. S. C. Report	$47,841.12

(32) Interest on Bank Balances, etc.:

Interest on Bank Balances included in Misc. Operating Revenue by Mr. Teele in Exhibit No. 813, but classified as Non-Operating Revenue in P. S. C. Report	$46,965.19
Interest on Consumers Final Bills included in "Other Miscellaneous Gas Revenue" in P. S. C. Report (See #34)	215.10
	$47,180.29

[fol. 3969] (33) Rental of Jointly Used Facilities:

Portion of Rent Revenue from Joint Facilities applicable to return on investment in property used by others, excluded by Mr. Teele in Exhibit No. 813	$180,180.54
Adjustment of payment by Standard Company to New York Mutual Gas Light Company for plant capacity during period January to August 1922, excluded by Mr. Teele in Exhibit 813	10,809.30
	$190,989.84

(34) Miscellaneous Rent Revenue:

Rent Revenue from property not claimed in the gas business, excluded by Mr. Teele in Exhibit No. 813:

Block	Lot	Location	Amount	
691	11	19th St. & 11th Avenue..	4,994.41	
715	59	438-454 West 18th St.....	5,500.00	
870	47, 60	General Office Bldg.....	408,980.02	
965	39, 40	East 18th Street.....	1,000.00	
1092	7	44th Street Station.....	2,541.68	
1092	28	"	500.00	
1156	45, 46	222-228 W. 65th Street..	8,420.00	
1455	13	Avenue A & 60th Street..	750.00	
1474	24	" ..	500.00	
1683	34, 35	E. 112th St. W. 1st Ave.	400.00	
2123	48-51	166th St. & Audubon Ave	1,800.00	
2175	15, 18, 22, 100, 124	Inwood	300.00	
2583	360	E. 132nd St. & Locust Ave.	50.00	
2184	1	Kent Avenue, Brooklyn..	818.75	
		Tenement properties.....	5,876.00	
				$442,430.86
Less Maintenance and Insurance deducted from Misc. Rent Revenue in P. S. C. Report.....			$211,945.46	
Less Taxes deducted from Misc. Rent Revenue in P. S. C. Report.....			89,655.98	
				301,601.44
Net Rent Revenue.....				$140,829.42
Interest on Consumers Final Bills (included in "Interest on Bank Balances, etc." in Exhibit No. 813).....				215.10
Stock Scrip Adjustment, excluded from gas operations by Mr. Teele in Exhibit No. 813.....				33.00
Total				$141,077.52

PLAINTIFF'S EXHIBIT NO. 885

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT OF DIFFERENCES IN CLASSIFICATION IN RE OPERATING EXPENSES AND MISCELLANEOUS OPERATING REVENUE FOR THE YEAR 1923, BETWEEN (1) THE FORM BASED OF THE UNIFORM SYSTEM OF ACCOUNTS, USED BY Mr. TEELE IN HIS SCHEDULE OF "COST OF PRODUCTION AND DISTRIBUTION, YEAR ENDED DECEMBER 31, 1923", (EXHIBIT NO. 816), AND (2) THE FORM OF ANNUAL REPORT FURNISHED BY THE PUBLIC SERVICE COMMISSION, AS FILED BY THE COMPANY WITH THE COMMISSION FOR THE YEAR ENDED DECEMBER 31, 1923 (EXHIBIT NO.812).

		Per Teele Schedule (Exhibit No. 816)	Per P. S. C. Report (Exhibit 812) Reference	Amount
COST OF PRODUCTION:				
Generator Fuel - Coal	$1,116,653.57			
- Coke	391,506.51	$1,508,345.08	P. 55, L. 13	$1,631,366.59
Boiler Fuel - Coal	179,233.03			
- Coke	64,226.10			
- Water Gas Tar	266,428.51	511,887.84	P. 55, L. 8	533,231.02
Labor, Cartage, etc. handling		164,364.69		-
Total Fuel -		$2,164,597.61		$2,164,597.61
Gas Oil		$2,000,021.00	P. 55, L. 14	$1,997,432.54
Water		23,110.04	P. 55, L. 9	23,110.04
Iron Mass	19,979.94			
Shavings	1,871.93	21,851.87	P. 55, L. 15	21,851.87
Sundry Supplies		8,958.00		-
Labor, cartage, etc. handling spent material		51,356.00		-
Residuals Produced	213,250.47 X			
Less Residuals Expense	8,062.57	305,194.93 X	P.55, L. 30 X	305,196.90 X
Gas Making Labor		375,139.60	P. 55, L. 7	375,139.60
Repairs - Water Gas	433,023.64			
- 14th & 42nd St. Stas.	9,574.36	442,598.00	P. 55, L. 17-27	442,598.00
Miscellaneous Works Expense		104,057.94	P. 56, L. 16	129,167.94
Gas Storage		267,623.19	P. 56, L. 28	266,639.19
		$5,154,327.15	P. 51, L. 10	$5,115,340.19
Gas Purchased				
Astoria Light, Heat & Power Co.		$6,921,577.78	P. 51, L. 41	$6,921,577.78
New Amsterdam Gas Company		146,937.58	P. 51, L. 43	146,937.58
Standard Gas Light Company		41,991.02	P. 51, L. 42	41,991.02
Use of Manufacturing Plant				
Astoria Light, Heat & Power Co		2,507,258.67	P. 51, L. 44	2,507,258.67
		$9,617,765.05	P. 51, L. 45	$9,617,765.05
Total Cost of Production		$14,772,092.20		$14,733,105.24

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT OF DIFFERENCES IN CLASSIFICATION IN RE OPERATING EXPENSES AND MISCELLANEOUS OPERATING REVENUE FOR THE YEAR 1928, BETWEEN (1) THE FORM BASED ON THE UNIFORM SYSTEM OF ACCOUNTS, USED BY MR. TEELE IN HIS SCHEDULE OF "COST OF PRODUCTION AND DISTRIBUTION, YEAR ENDED DECEMBER 31, 1928". (EXHIBIT NO. 816), AND (2) THE FORM OF ANNUAL REPORT FURNISHED BY THE PUBLIC SERVICE COMMISSION, AS FILED BY THE COMPANY WITH THE COMMISSION FOR THE YEAR ENDED DECEMBER 31, 1928 (EXHIBIT NO. 812).

		Per Teele Schedule (Exhibit No. 816)	Per P.S.C. Report (Exhibit 812) Reference	Amount	Variation	Remarks
COST OF DISTRIBUTION & OTHER EXPENSES:						
Distribution Superintendence & Supp. & Exp.		$609,138.81	P. 56, L. 3 & 4	$564,015.05	$45,123.76	(10)
Meter & Installation Work		498,615.90	P. 56, L. 5	498,615.90	-	
Work on Consumers Premises - Misc.	$626,528.92					
- Gas Supply Insp.	100,101.06	726,629.98	P. 56, L. 6	726,629.98	-	
Repairs-Mains		187,263.89	P. 56, L. 8	187,263.89	-	
" Services		159,168.27	P. 56, L. 9	159,168.27	-	
" Meters		541,028.56	P. 56, L. 10	541,028.56	-	
" Distribution Tools		42,709.84	P. 56, L. 11	42,709.84	-	
" Gas Appliances		252,046.59	P. 56, L. 12	252,046.59	-	
" Buildings		30,150.75	P. 56, L. 13	11,795.37	18,344.38	(11)
Distribution Dept. Expenses -		$3,046,741.29	P. 51, L. 16	$2,989,275.15	63,466.14	(12)
Repairs Street Lamps		$1,317.18	P. 56, L. 17	$1,317.18	-	
Commercial Expenses		1,671,811.72	P. 57, L. 7	1,667,452.90	4,358.82	(13)
Salaries - General Office	$608,642.11					
Supplies & Expenses - General Office	201,154.11	809,796.22	P. 57, L. 9-11	801,697.17	8,099.05	(14)
General Law Expense		48,679.10	P. 57, L. 12	48,679.10	-	
Claims & Arrears Expense		27,482.06		-	27,632.06	(15)
Claims for Damages		6,264.87	P. 57, L. 13	6,264.87	-	
Insurance		188,548.42	P. 57, L. 15	188,548.42	-	
Vacations & Sickness	143,974.04					
Contributions to Employees Mutual Aid Society	85,166.82					
Superannuation	159,268.18	388,408.04	P. 57, L. 16	388,408.04	-	
Stable & Automobile Expense		288,613.11	P. 57, L. 22	296,962.54	7,349.43 X	(16)
Expense re Gas Rate Appeal No. 3	86,466.06					
Expense re P. S. C. Hearings	113.86					
Miscellaneous General Expense	174,041.04	262,620.96	P. 57, L. 13	252,567.30 X	65.48	(17)
Undistributed Adjustments		134,688.60 X	P. 57, L. 25-26 X	134,685.10 X	3.50	(18)
Duplicate Gas Charges		84,122.70 X	P. 57, L. 27 X	84,122.70 X		
Uncollectible Bills		110,734.41	P. 51, L. 24	110,734.41	-	
Interest on Consumers Deposits		94,032.42		-	94,032.42	(19)
Use of Distributing System		474,535.49	P. 51, L. 25	474,535.49	-	
Repairs, insurance, etc. re property rented to others		567.77			567.77	(20)
Municipal Rents		-	P. 51, L. 26	36,281.83	36,281.83 X	(21)
Miscellaneous Operating Rents		-	P. 51, L. 29	63,644.36	63,644.36 X	(22)
General Stationery & Printing		-	P. 57, L. 20	33,222.39	33,222.39 X	(23)
Total Cost of Distribution, etc.		$7,172,511.18		$7,114,801.86	$57,709.32	(24)
Retirement Expense		$842,019.30	P. 51, L. 28	$842,019.30	$ -	
Taxes		1,834,309.33	P. 51, L. 28	2,241,899.75	417,590.42 X	(25)
Interest on Unpaid Taxes		115,042.57		-	115,042.57	(26)
TOTAL COST OF PRODUCTION AND DISTRIBUTION		$24,725,574.56	P. 51, L. 30	$24,931,528.15	$205,951.57 X	(27)

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT OF DIFFERENCES IN CLASSIFICATION IN RE OPERATING EXPENSES AND MISCELLANEOUS OPERATING REVENUE FOR THE YEAR 1923, BETWEEN (1) THE FORM BASED ON THE UNIFORM SYSTEM OF ACCOUNTS, USED BY MR. TEELE IN HIS SCHEDULE OF "COST OF PRODUCTION AND DISTRIBUTION, YEAR ENDED DECEMBER 31, 1923", (EXHIBIT No. 816). AND (2) THE FORM OF ANNUAL REPORT FURNISHED BY THE PUBLIC SERVICE COMMISSION, AS FILED BY THE COMPANY WITH THE COMMISSION FOR THE YEAR ENDED DECEMBER 31, 1923 (EXHIBIT NO. 812).

	Per Teele Schedule (Exhibit No. 816)	Per P. S. C. Report (Exhibit 812) Reference	Amount	Variation		Remarks
MISCELLANEOUS OPERATING REVENUE:						
Gross Profit from sale of Gas Appliances, etc.	$350,133.90	P. 52, L. 39	$350,133.90	-		
Rent of Gas Appliances	1,547,152.89	P. 52, L. 30	1,699,311.77	$47,841.12		(28)
Interest on Bank Balances, etc.	58,638.74			58,638.74		(29)
Rentals of Jointly Used Facilities	64,469.57	P. 52, L. 41	207,128.71	142,659.14	X	(30)
Miscellaneous Rent Revenue	75.065.12	P. 52, L. 42	222.917.51	147.052.39	X	(31)
Total Misc. Operating Revenue -	$2.096.260.22	P. 52, L. 43	$2.279.491.89	$193.231.57	X	(32)

[* Red in copy.]

[fol. 3970] (35) Total Misc. Operating Revenue:

Revenue excluded from gas operations by Mr. Teele in Exhibit No. 813:		
Return on investment in portion of Joint Facilities used by other companies		$190,989 84
Rent Revenue and Expenses applicable to property not claimed in present suit:		
Rent Revenue	$442,430 86	
Less Maintenance and Taxes	301,601 44	
		140,829 42
Adjustment of Stock Scrip—classified by Mr. Teele as "Non-Gas"		33 00
Total Revenue excluded in Exhibit No. 813		$331,852 26
Adjustment of Rent of Gas Appliances made in 1923 applied to 1922 operations by Mr. Teele in Exhibit No. 813, not recorded in 1922 P. S. C. Report		47,841 12
		$379,693 38
Less Interest on Bank Balances included in Exhibit No. 813, but classified as Non-Operating Revenue in P. S. C. Report		46,965 19
		$332,728 19

(Here follow three sheets of Plaintiff's Exhibit No. 885, marked side folio pages 3971 and 3972, 3973, and 3974)

[fol. 3975] (1) Generator Fuel:

Labor, etc. handling, included in generator fuel in P. S. C. Report and classified separately by Mr. Teele in Exhibit 816	$123,021 51

(2) Boiler Fuel:

Labor, etc. handling, included in boiler fuel in P. S. C. Report and classified separately by Mr. Teele in Exhibit 816	$21,343 18

(3) Labor Handling Coal and Coke:

Included with fuel in P. S. C. Report:

Generator Fuel	$123,021 51
Boiler Fuel	21,343 18
Total	$144,364 69

(4) Gas Oil:

Amount of credit received subsequent to August 31, 1922 for allowance made by Standard Oil Co. for slop taken from 11th St. Station prior to the purchase of the property by the Consolidated Gas Co., excluded by Mr. Teele in Exhibit 816, as not applicable to gas operations of the Consolidated Company	$2,588 96

(5) Sundry Supplies:

Sub-division of "Misc. Works Expense" set forth separately by Mr. Teele in Exhibit 816	$8,968 00

(6) Labor, cartage, etc., handling spent material:

Sub-division of "Misc. Works Expense" set forth separately by Mr. Teele in Exhibit 816	$51,556 00

(7) Miscellaneous Works Expense:

Items classified separately by Mr. Teele in Exhibit 816:	
Sundry Supplies	$8,968 00
Handling Spent Material	51,556 00
Total	60,524 00
Less Rents applicable to Manufacturing Stations included in "Misc. Works Expense" in Exhibit 816 and reported under General Expenses in P. S. C. Report	35,414 00
Net Variation	$25,110 00

[fol. 3976] (8) Gas Storage:

Rents included in "Gas Storage" in Exhibit 816 and reported under "General Expenses" in P. S. C. Report	$984 00

(9) Total Cost of Production:

Rents classified in P. S. C. Report to General Expenses:	
Included in Miscellaneous Works Expense	35,414 00
Included in Gas Storage	984 00
Credit for Slop Oil excluded from Gas Operations by Teele in Exhibit 816	2,588 96
	$38,986 96

(10) Distribution Superintendence & Supplies & Expenses:

Rents classified elsewhere in P. S. C. Report, included in Dist. Supplies & Expenses in Exhibit 816	$45,116 05
Adjustment of Operating G. O. Building by Mr. Teele in Exhibit 816	7 71
	$45,123 76

(11) Repairs Distribution Buildings:

"Repairs Buildings—Branches" included in P. S. C. Report under Commercial Expenses	$10,994 95
"Repairs Buildings—Stables & Garages" included in P. S. C. Report under Stable & Garage Expenses	7,349 43
	$18,344 38

(12) Total Distribution Expenses:

Rents Classified elsewhere in P. S. C. Report	$45,116 05
"Repairs Buildings—Branches" classified elsewhere in P. S. C. Report	10,994 95
"Repairs Buildings—Stables & Garages" classified elsewhere in P. S. C. Report	7,349 43
Adjustment in Operating G. O. Building by Mr. Teele	7 71
	$63,468 14

(13) Commercial Expenses:

Rents classified elsewhere in P. S. C. Report	$15,279 32
Adjustment of Operating G. O. Building by Mr. Teele in Exhibit 816	74 45
	$15,353 77
Less Repairs Buildings—Branches included in Commercial Expenses in P. S. C. Report	10,994 95
	$4,358 82

[fol. 3977] (14) General Office Salaries & Supplies & Expenses:

Claims & Arrears Expense included in P. S. C. Report and classified separately by Mr. Teele in Exhibit 816		$27,626 94
Less items included by Mr. Teele in Exhibit 816 and classified elsewhere in P. S. C. Reports:		
Rents	$3,132 02	
Stationary & Printing	$33,222 20	
		36,355 12
		8,728 18
Less adjustment of Operating G. O. Building by Mr. Teele in Exhibit 816		639 13
		$8,099 05

(15) Claims & Arrears Expense:

Included in G. O. Supplies & Expenses in P. S. C. Report, but classified separately by Mr. Teele in Exhibit 816	$27,626 94
Adjustment of Operating G. O. Building by Mr. Teele in Exhibit 816	5 12
	$27,632 06

(16) Stable & Automobile Expense:

"Repairs Building-Stables & Garages" included in "Repairs Distribution Buildings," by Mr. Teele	$7,349 43

(17) Miscellaneous General Expense:

Adjustment of Operating G. O. Building by Mr. Teele in Exhibit 816	$65 48

(18) Undistributed Adjustments:

Item classified to Undistributed Adjustments by Mr. Teele in Exhibit 816, included in P. S. C. Report in expenses deducted from Misc. Rent Revenue	$3.80

(19) Interest on Consumers Deposits:

Included in "Miscellaneous Interest Deductions" in P. S. C. Report	$94,032.42

[fol. 3978] (20) Repairs, Insurance, etc. re Rented Property:

Expenses applicable to rent revenue from gas property, per Exhibit 258, set forth separately in Exhibit 816, and included in P. S. C. Report in expenses deducted from Misc. Rent Revenue	$547.77

(21) Municipal Rents	$36,281.83
(22) Miscellaneous Operating Rents	63,644.36
For details see P. S. C. Report. Schedule 577, Page 61.	
Total	$99,926.19

Rent expenses reported under above headings in the P. S. C. Report, classified to the departmental expenses in Exhibit 816:		
Misc. Works Expense	$35,414.00	
Gas Storage	984.00	
Distribution Supplies & Expenses	45,116.05	
Commercial Expenses	15,279.32	
G. O. Supplies & Expenses.	3,132.82	
		$99,926.19

(23) General Stationery & Printing:

Reported separately in P. S. C. Report included in General Office Salaries & Supplies & Expenses by Mr. Teele in Exhibit 816	$33,222.30

(24) Total Cost of Distribution:

Interest on Consumers' Deposits included by Mr. Teele in Exhibit 816, classified elsewhere in P. S. C. Report		$94,032.42
Expenses applicable to rent revenue from gas property set forth separately in Exhibit 816, included in expenses deducted from Rent Revenue in P. S. C. Report		547.77
Item classified to "Undistributed Adjustments" by Mr. Teele in Exhibit 816, deducted from Misc. Rent Revenue in P. S. C. Report		3.50
		$94,583.69
Less rents paid included in departmental expenses by Mr. Teele in Exhibit 816, classified elsewhere in P. S. C. Report	$36,398.00	
Less Adjustment of Operating G. O. Building by Mr. Teele in Exhibit 816	476.37	
		36,874.37
		$57,709.32

[fol. 3979] (25) Taxes:

	Operating taxes included in Exhibit 817	Operating taxes included in P. S. C. report	Variation
Gross Earnings	$144,598.14	$148,103.14	$3,505.00*
Excess Dividends	48,805.41	48,866.79	61.38*
Real Estate	800,213.21	774,177.27	26,035.94
Real Estate of Corporations	1,254.76	337,006.30	335,651.54*
Special Franchise	365,946.68	364,360.24	413.56*
Personal	.....	.....	.....
Federal Capital Stock	69,386.01	69,386.01	.....
Federal Income	395,905.12	500,000.00	104,094.88*
	$1,824,209.33	$2,241,899.75	$417,690.42*

[*Red in copy.]

(a) Gross Earnings Tax:

Tax on Miscellaneous Operating Revenue applicable to property not claimed in the gas business, excluded by Mr. Teele in Exhibits 816 & 817:		
Misc. Rent Revenue	$425,296.04	
Joint Gas Rent Revenue ..	275,701.86	
Total	700,997.90	
Tax @ ½ of 1%		3,505.00

(b) Excess Dividends Tax:

Portion applicable to gas operations of amount accrued in 1923 account for Excess Dividends Tax in excess of tax actually paid in 1924, adjusted by Mr. Teele in Exhibits 816 and 817 to the actual figures:		
Amount of over accrual	$307.65	
Applicable to gas operations, 19.95%		$61.38

[fol. 3980] (c) Real Estate:

Operating Taxes per P. S. C. Report, page 59, Line 4 & Note	$774,177.27
Misc. Operating Revenue Deductions—Taxes—Note, page 59	92,815.94
Total Real Estate Taxes, per P. S. C. Report	$866,993.21
Real Estate Taxes included by Mr. Toole....	800,213.21
Variation	$66,780.00

Consisting of Taxes on property not claimed in the gas business, in the present suit, excluded by Mr. Toole in Exhibits 816 and 817 as follows:

Block	Lot		
870	47, 60	$48,022.56	
681	11	6,576.00	
952	33	260 30	
...	34	260.30	
978	1	438.40	
...	2	356.20	
...	3	356.20	
...	4	274.00	
985	39	205.50	
...	40	205.50	
1092	28	315.10	
...	38	246.60	
...	38½	246.60	
...	39	246.60	
1474	24	561.70	
1683	34	191.80	
	35	191 80	
2123	48	424.70	
...	49	274.00	
...	50	260.30	
...	51	260.30	
2175	15	411.00	
...	18	657.60	
	22	685 00	
...	100	794.60	
...	124	137.00	
2583	360	2,877.00	
2184	1	1,918 00	
	Total Taxes	$67,654.66	
	Less assessments capitalized	78.59	
			$67,576.07
	Less assessments for local improvements applicable to Special Franchise and Real Estate of Corporations Taxes capitalized and deducted from Real Estate Taxes in P. S. C. Report instead of from the taxes to which they applied		796.07
			$66,780.00

[fol. 3981] (d) Real Estate of Corporations:

Real Estate of Corporations Taxes levied and accrued in 1923, cancelled by the City of New York in 1924, excluded by Mr. Toole in Exhibits 816 and 817, as follows:		
Harlem Gas Light Company.	$44,525.00	
Knickerbocker Gas Light Company	54,890.00	
Manhattan Gas Light Company	71,240.00	
Metropolitan Gas Light Company	58,910.00	
Municipal Gas Light Company	51,375.00	
New York Gas Light Company	54,800.00	
Total	$335,650.00	
Less Assessments capitalized	380.97	
		$335,269.03
Assessments applicable to Real Estate of Corporations Taxes capitalized and deducted from Real Estate Taxes in F. S. C. Report in error. (See item C)		382.51
		$335,651.54

(e) Special Franchises:

Assessments applicable to Special Franchise Tax capitalized and deducted from Real Estate Taxes in P. S. C. Report in error. (See item C)	$413.56

(f) Federal Income:

Estimated tax accrued in 1923 accounts subject to adjustment upon determination of actual tax reported in P. S. C. Report	$500,000.00
Actual tax for year 1923 as determined in 1924, adopted by Mr. Toole in Exhibits 816 and 817	395,905.12
Variation	$104,094.88

[fol. 3982] (26) Interest on Unpaid Taxes:

Classified elsewhere in P. S. C. Report (Schedule 594, Page 63)	$115,042.57

(27) Total Cost of Production & Distribution:

Items included by Mr. Teele in Exhibit 816, classified elsewhere in P. S. C. Report:		
Interest on Consumers' Deposits	$94,032.42	
Interest on Unpaid Taxes	115,042.57	
Repairs, maintenance, etc. of rented gas property, deducted from "Misc. Rent Revenue" in P. S. C. Report	547.77	
Undistributed Adjustment—Amount deducted from Misc. Rent Revenue in P. S. C. Report	3.50	
Credit received for slop oil returned, excluded by Mr. Teele, in Exhibit 816	2,588.96	
		212,215 22
Less amount excluded by Mr. Teele from Operating Taxes, as set forth in item 25	417,690 42	

Less amount excluded by Mr. Teele in recost of Operating C. O. Building	476.37	418,166.79
Net Variation		$205,951.57

(28) Rent of Gas Appliances:

Adjustment in January, 1923, applicable to 1922 revenue, included in 1923 revenue in P. S. C. Report, and applied to 1922 operations by Mr. Teele in Exhibit 816	$47,841.12

(29) Interest on Bank Balances, etc.:

Interest on Bank Balances, classified in the P. S. C. Report as "Non-Operating Revenue," (shown in detail in Schedule 568 on page 62, and in total on Page 50, Line 24), included as Misc. Operating Revenue by Mr. Teele in Exhibit 816	$58,536.06
Interest on Consumers' Final Bills included in P. S. C. Report in "Other Miscellaneous Gas Revenue" on page 52, Line 42 (See #31)	102.68
	$58,638.74

(30) Rental of Jointly Used Facilities:

Portion of Rent Revenue from Joint Facilities applicable to return on investment in property used by others, excluded by Mr. Teele in Exhibit 816	$142,659 14

[fol. 3983] (31) Miscellaneous Rent Revenue Under title of "Other Miscellaneous Gas Revenue" in P. S. C. Report:

Rent Revenue from property not claimed in the gas business, excluded by Mr. Teele in Exhibit 816:

Block	Lot	Location	Amount	
691	11	19th St. and 11th Avenue	$4,500.00	
715	59	438/54 West 18th St.	5,500.00	
870	47, 69	General Office Building	408,821.06	
985	39, 40	East 18th Street	1,000.00	
1002	7	44th Street Station	106.66	
1002	28	"	500.00	
1156	45, 46	222/8 West 65th Street	8,420.00	
1474	24	Avenue A and 69th St.	500.00	
1683	34, 35	East 112th St. W of 1st Ave.	400.00	
2123	48, 51	193th St. & Audubon Ave.	1,800.00	
2175	15, 18, 22, 109, 124	Inwood	300.00	
2583	300	132nd St. & Locust Ave.	6,900.00	
2184	1	Kent Avenue, Brooklyn	4,400.00	
Tenement Properties			5,171.00	
				$448,379.32
Less Maintenance and insurance deducted from Misc. Rent Revenue in P. S. C. Report			208,613.67	
Less taxes deducted from Misc. Rent Revenue in P. S. C. Report			92,815.94	
				301,429.61
Net Rent Revenue				$146,949.71
Interest on Consumers Final Bills included under this title in P. S. C. Report and classified by Mr. Teele with "Interest on Bank Balances, etc." in Exhibit 816. (See Item 229)				102.68
Total				$147,052.39

(32) Total Miscellaneous Operating Revenue:

Revenue excluded from Gas Operations by Mr. Teele in Exhibit 816:

Return on investment in portion of Joint Facilities used by other companies	$142,659.14
Rent Revenue and expenses applicable to Non-Gas property	146,949.71
	$289,608.85

Less interest on Bank Balances included by Mr. Teele in Misc. Operating Revenue in Exhibit 816, and reported under Non-Operating Revenue in P. S. C. Report	$58,536.06	
Less adjustment of Rent of Gas Appliances made in 1923 applicable to 1922 operations, included in 1923 revenue in P. S. C. Report but applied to 1922 operations by Mr. Teele in Exhibit 816	47,841.12	
		106,377.18
Net Variation		$183,231.67

[fol. 3984] PLAINTIFF'S EXHIBIT NO. 885A

This exhibit consists of the judgment roll in the case of the Consolidated Gas Company of New York v. Newton, as Attorney General, et al., in the United States District Court for the Southern District of New York, and includes the following:

[fol. 3984a] [Part of Plaintiff's Exhibit 885a]

DISTRICT COURT OF THE UNITED STATES, SOUTHERN DISTRICT OF NEW YORK

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

CHARLES D. NEWTON, as Attorney-General of the State of New York; Edward Swann, as District Attorney of the County of New York, and Lewis Nixon, Constituting the Public Service Commission of the State of New York for the First District, Defendants

Report and Opinion of the Special Master

A. S. Gilbert, Special Master

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[fol. 3989] UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF NEW YORK

In Equity. No. 15-358

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

CHARLES D. NEWTON, as Attorney-General of the State of New York; Edward Swann, as District Attorney of the County of New York, State of New York; and Lewis Nixon, constituting the Public Service Commission of the State of New York for the First District, Defendants

Report of the Special Master

To the Honorable Judges of the said Court:

I, the undersigned, Special Master appointed by Honorable Julius M. Mayer, District Judge, by order dated the 16th day of May, 1919, "to take all of the testimony and evidence with respect to the issues herein, make all needed computations and fully find the facts, and * * * report to this Court all the testimony and evidence received by him, together with his findings of fact and his recommendations as to the facts and the law," do hereby respectfully [fol. 3990] report: that having been attended by counsel as below stated, I proceeded to take the proofs submitted by the several parties and to hear arguments thereon, the proofs so taken consisting of nineteen volumes of printed testimony, pages 1 to 15,919, which are herewith submitted and filed, together with a stipulation signed by the various solicitors of record waiving the signatures of the various witnesses to their several depositions and further waiving the filing of the original exhibits marked in evidence. As many of the exhibits consist of very large volumes of account books of the complainant and other companies, the question of filing copies of all of the original exhibits with the Court will require a further order.

There appeared before me as counsel the following:

For complainant: Messrs. William L. Ransom, Charles A. Vilas and Jacob H. Goetz;

For the defendant Newton: Hon. Wilber W. Chambers, Deputy Attorney General of the State of New York;

For the defendant Swann: Hon. John P. O'Brien, Assistant Corporation Counsel (now Corporation Counsel) of the City of New York;

For the defendant Public Service Commission: Hon. William Hayward, Mr. John Holley Clark, Jr., and Mr. Eli Neumann.

Upon the proofs so taken, I find and report as follows:

1. The complainant Consolidated Gas Company of New York was organized in the year 1884, under and in pursuance of the provisions of Chapter 367 of the Laws of [fol. 3991] 1884, entitled "An act to authorize the consolidation of manufacturing corporations."

2. The organization took place by the consolidation of six then existing gas companies, as follows:

New York Gas Light Co.,	incorporated	in	1823.
Manhattan Gas Light Co.	"	"	1830.
Metropolitan Gas Light Co.	"	"	1855
Harlem Gas Light Co.	"	"	1855.
Municipal Gas Light Co.	"	"	1874.
Knickerbocker Gas Light Co.	"	"	1876.

3. At the time of consolidation, the six companies above described owned and used certain lands, buildings and other property, real and personal, for, and were actually engaged in, the manufacture, sale and distribution of gas in what was then the City of New York, now the Borough of Manhattan, City of New York. In addition to the property above described, the six constituent companies were possessed of, owned and were in the actual enjoyment of perpetual franchises and rights:

(1) To be corporations and to exercise the privileges and rights of corporate action;

(2) To use the streets, alleys and public places of the City of New York, for the purpose of laying street mains therein and supplying gas through said mains to the inhabitants of the city;

(3) Sundry other intangible rights.

4. By virtue of the consolidation and of the law authorizing it, the complainant company became possessed of and became the owner in fee simple of all of the real property owned by the six constituent companies and the owner of the franchises and rights then owned, possessed or enjoyed by the constituent companies and of the personal property owned by said companies.

[fol. 3992] 5. The complainant company has ever since the date of consolidation (November 10, 1884) owned, possessed, used and enjoyed all of the said franchises and rights of the said constituent companies, and still does own, possess, use and enjoy the said franchises and each of them, together with additional rights and franchises from time to time acquired by it, and the said complainant company, by virtue of the said franchises and rights, has ever since said date maintained and still does maintain its mains and services in the streets, alleys and public places of the City of New York, and has supplied and still does supply gas through said mains and services to the inhabitants of the City of New York.

6. An appraisal was made during the summer of 1884 by the interested parties of the tangible property of the six constituent companies, amounting in the aggregate to $30,052,453.96. Upon revision the final total was reduced to $29,994,000.00. The value of the franchises and rights of the constituent companies was then estimated at $7,781,000.00, said sum being by agreement between the companies apportioned among them in proportion to their respective sales of gas.

7. The amount of the capital and assets of the complainant on organization, excluding working capital, was made up as follows:

Real Estate	$10,332,000 00
Plant	12,175,000 00
Mains	5,217,000 00
Services	1,005,000 00
Meters	1,195,000 00
Office furniture and fixtures	70,000 00
Total	$29,994,000 00
Franchises and rights	7,781,000 00
Total	$37,775,000 00

[fol. 3993] 8. The figures at which these assets were acquired by the complainant company, and upon which its books were opened, was accordingly $37,775,000.00, although the authorized capital of the company under the consolidation agreement for the purpose of taking over these constituent companies was fixed at $39,078,000.00, leaving a balance of $1,303,000.00 to provide working capital.

9. The figure of $39,078,000.00, the amount of capital authorized for the purpose of taking over the properties of these constituent companies, was upon the basis of the actual market value of the shares of the constituent companies at that time.

10. Stock of the complainant company to the aggregate of $37,775,000.00 was thereupon issued in purchase of the assets of the six constituent companies appraised as above stated, except that $2,239,000.00 was retained in the treasury of the complainant company to retire obligations of a like amount of said constituent companies which might be a lien on the property, and $15,940.00 was retained for the purpose of making sundry adjustments pursuant to agreement, the balance $35,430,060.00 being issued directly to the stockholders of the constituent companies.

11. On or about November 11, 1884, the first appraisal of the values of the properties of the several constituent companies as aforesaid made, was adjusted to cover additions to that date, and the said adjusted appraisal as then made was as follows:

Real Estate	$10,332,000 00
Plant	12,182,491 41
Mains	5,233,962 10
Services	1,034,241 41
Meters	1,231,753 98
[fol. 3994] Meter cocks and connections	11,926 53
Pipes and specials	88,398 43
Office furniture and fixtures	70,000 00
Horses, wagons and harness	1,115 00
Tools and implements	3,273 70
Gas stoves	1,256 45
Scows	.....
Franchises and rights	7,781,000 00
Total	$37,971,419 01

12. Since the organization of the complainant company, its capital stock has been increased from time to time, much of the proceeds of this additional capital stock having been used for the purchase of stock and securities of other gas and electric companies in and about the City of New York, so that at the time of the commencement of this action the complainant company owned all of the stock of the Astoria Light, Heat and Power Company, and practically all of the stock of the New Amsterdam Gas Company, the Standard Gas Light Company, New York Edison Company, United Electric Light & Power Company, and various other gas and electric companies, and also owned a majority of the stock of the New York Mutual Gas Light Company. The New Amsterdam Gas Company owns all of the stock of the East River Gas Company and of the Central Union Gas Company, and, either directly or through its ownership of the stock of the Central Union Gas Company, all of the capital stock of the Northern Union Gas Company, substantially one-half of which is owned by the Central Union Gas Company.

13. By Chapter 125 of the Laws of 1906 it was provided, among other things, that "a corporation, association, copartnership or person engaged in the business of manufacturing, furnishing or selling illuminating gas in the City [fol. 3995] of New York * * * shall not charge or receive for gas manufactured, furnished or sold in said City a sum per thousand cubic feet in excess of the following rates: (1) In the Borough of Manhattan * * * eighty cents." It was further provided in and by said statute that "the illuminating gas furnished by any such corporation, association, copartnership or person shall have an illuminating power of not less than twenty-two sperm candles of six to a pound, burning at the rate of 120 grains of spermaceti per hour, tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet of gas per hour, and each one hundred cubic feet of gas shall not contain more than five grains of ammonia, nor more than twenty grains of sulphur, nor more than a trace of sulphurated hydrogen. The pressure of illuminating gas in any service mains in said city at any distance from the place of manufacture shall not be less than one inch nor more than two and one-half inches."

14. Shortly after the enactment of this statute, the complainant company instituted an action in the Circuit Court of the United States, Southern District of New York, for a decree declaring the said statute unconstitutional because confiscatory of the complainant's property. That action having resulted in a decree in favor of the complainant, was presented on appeal to the Supreme Court of the United States, which court by decision rendered January 4th, 1909, opinion filed January 12th, 1909 (212 U. S. 19), dismissed the bill in the following language:

"It may possibly be, however, that a practical experience of the effect of the acts by actual operation under them might prevent the complainant from obtaining a fair return, as already described, and in that event complainant [fol. 3996] ought to have the opportunity of again presenting its case to the court. To that end we reverse the decree, with directions to dismiss the bill without prejudice."

15. Since the decision by the United States Supreme Court (212 U. S. 19) the complainant company has continued the manufacture and sale of gas in its own plants and has purchased and received gas manufactured in the plant of the Astoria Light, Heat and Power Company, all of the stock of which company, as above stated, is owned by the complainant company, and also in the plants of the New Amsterdam, Standard and Mutual Gas Light Companies.

16. In the manufacture and distribution of gas, the complainant company established a system of exchanging gas with the other companies above described and entered into so-called agency agreements with the New Amsterdam, Standard and New York Mutual Companies and into a purchase agreement with the Astoria Light, Heat and Power Company.

17. During the year 1918, and for the first eight months of 1919, and for the twelve months ended October 31, 1919, those periods being the ones to which proof was particularly directed, two kinds of gas were manufactured in these various plants: (a) coal-gas, and (b) water-gas. The complainant company in its own plants in the Borough of Manhattan manufactured water-gas at the two stations known as Twenty-first Street and Ninety-ninth Street, and made more or less coal-gas at the two stations known as the

Fourteenth and Forty-second Street stations. The Astoria Light, Heat and Power Company made coal-gas as well as water-gas. Coal-gas was made by the Astoria Company in two units which may be described as "A" and "B," each [fol. 3997] with a rated capacity of 10,000,000 cubic feet per day, and water-gas in one unit, to be designated as "C," with a rated capacity of 30,000,000 cubic feet per day. The New Amsterdam Company, The Standard Gas Light Company and the New York Mutual Gas Light Company made and make water-gas.

18. Since January 1st, 1908, the books of account of the complainant company and of all other gas companies in the City of New York have been required to be kept in accordance with the rules and regulations of the Public Service Commission of the State of New York for the First District, which commission has had jurisdiction over said companies pursuant to the provisions of the Public Service Commission Law of the State of New York (so-called), and I find that the books of the complainant company, as well as those of the Astoria Light, Heat and Power Company, have been kept in conformity with said rules and regulations and accurately set forth the facts therein contained.

19. In the manufacture of water-gas of the statutory standard of 22 candle power, there is required the use, per thousand cubic feet of gas made, of approximately 4.1 gallons of gas oil of the gravity and quality now being supplied to the gas company and in the manufacture of coal-gas approximately 1.6 gallons of such gas oil are required to raise such coal-gas to the required candle-power.

20. The average price reasonably and necessarily paid by the Consolidated Gas Company for gas oil during 1918 was 6.5 cents per gallon, and during the first eight months of 1919 was 6.9 cents per gallon. The records of the Astoria Light, Heat and Power Company would indicate that the average cost of gas oil to that company in 1918 was 6.5 [fol. 3998] cents per gallon and during the first eight months of 1919 was 6.8 cents per gallon.

21. The present price at which contracts may be made for the delivery of gas oil alongside gas manufacturing plants in the Borough of Manhattan or in Long Island City

is in excess of 6.9 cents per gallon plus lighterage cost. The trend of oil prices is sharply upward.

22. In the manufacture of water-gas, there is required per thousand cubic feet of gas made approximately 35 pounds of anthracite coal of the grade of coal being supplied in recent years or its fuel equivalent, of which 35 pounds of coal, about 32.5 pounds goes into the generators, and of which about 2.5 pounds are unsuitable for use in the generators and are used under the boilers along with approximately 11.5 pounds of anthracite boiler fuel or its equivalent in water-gas tar (one gallon of such tar weighing 9 pounds and 1 pound of tar being a fuel value of about 1.7 pounds of the grade of boiler fuel now and recently supplied).

23. The price of anthracite generator fuel was $8.26 per gross ton as of October, 1919, and now is more than that sum, the exact extent of such further increase not appearing in the record.

24. The price of anthracite boiler fuel was $5.12 per gross ton as of October, 1919, and now is more than that sum, the exact extent of such further increase not appearing in the record.

25. In addition to the cost of fuel, there is involved in water-gas manufacture the expense of labor handling of fuel used in the generators and under the boilers.

[fol. 3999] 26. In the manufacture of water-gas there is also required the use of iron mass, city water and incidental minor materials and supplies.

27. In the manufacure of water-gas there is realized as a residual credit about .656 gallons of water-gas tar per thousand cubic feet of gas made, which, as of October, 1919, had a market or sale value of 4 cents per gallon. There is also realized as a residual credit in water-gas manufacture about .0615 gallons of drip oil per thousand cubic feet of gas made, which, in October, 1919, had a market or sale value of 5.7 cents per gallon.

28. The evidence adduced in this record affords no grounds for expecting that the prices of materials or the wages paid to labor will be reduced during the 1920 or 1921 or at any time which can now be forecast.

29. There is necessary in the manufacture of water-gas the employment of gas-making labor, the employment of repair labor, the use of repair material, the incurring of miscellaneous works expense and the incurring of gas storage expenses at the works and distributing holders.

30. During the year 1918, under the prices of materials and labor at that time in force, the cost of water-gas manufacture (exclusive of gas storage expense) was 42.66 cents per thousand cubic feet of gas made in the plants of the Consolidated Gas Company, and during the eight months ending August 31, 1919, the cost of water-gas manufacture (exclusive of gas storage expense) under the prices of materials and labor at that time in force, was 48.43 cents per thousand cubic feet of gas made in the plants of the Consolidated Gas Company.

[fol. 4000] 31. During the year 1918 under the prices of materials and labor at that time in force the cost of water-gas manufacture (exclusive of gas storage expense) was 40.54 cents per thousand cubic feet of gas made in the plants of the Astoria Light Heat and Power Company, and during the eight months ending August 31, 1919, the cost of water-gas manufacture (exclusive of gas storage expense) under the prices of materials and labor at that time in force was 45.75 cents per thousand cubic feet of gas made in the plants of the Astoria Light, Heat and Power Company.

32. The average and reasonable cost of gas storage is one cent (1¢) per thousand cubic feet.

33. In the manufacture of coal gas there is required the use of approximately 200 pounds of bituminous gas coal per thousand cubic feet of gas made. There is also required per thousand cubic feet of gas made approximately 10 pounds of anthracite boiler coal or its fuel equivalent, and there is also required the expense of labor handling such gas coal and boiler coal.

34. The present cost to the Consolidated Gas Company and the Astoria Light, Heat and Power Company of such bituminous coal is at least $6 per gross ton, and the cost of such bituminous gas coal to the Consolidated Gas Company and the Astoria Light, Heat and Power Company as of October, 1919, was $5.90 per gross ton.

35. The cost of the bituminous gas coal used in the manufacture of coal gas at the plants of the Astoria Light, Heat and Power Company during the year 1918, including the labor handling thereof, was, under the prices and rates of pay at that time in force, 46.25 cents per thousand cubic feet of gas made, and during the eight months ended Au- [fol. 4001] gust 31, 1919, was 55.86 cents per thousand cubic feet of gas made.

36. In the process of coal gas manufacture there are derived per thousand cubic feet of gas made certain residuals to be credited to the cost of manufacture in quantities, and the market or sale price thereof, as of October, 1919, is as follows:

Coke and breeze for sale or use for other than coal-gas uses, 100 pounds at $6.347 per gross ton	$ 2833
Coal tar, 1.2 gallons at $.044 per gallon	0528
Ammoniacal liquor (sulphate), 1.5 pounds at $.0176 per pound	0264
Ammonia (absolute) .03 pounds at $.12 per pound	0036
Ammonia sulphate .30 pounds at $.0485 per pound	0146
Cyanogen .15 pounds at $.29 per pound	0435
Total	$ 4242

37. As a deduction from the foregoing residual credits aggregating 42.42 cents per thousand cubic feet of gas made, however, there is an expense of handling residuals including the cyanogen extraction, amounting to approximately 5 cents per thousand cubic feet of gas made, making the net proceeds from residuals, 37.42 cents per thousand cubic feet of gas made.

38. In order to enrich coal-gas so that the same shall fulfill the statutory standard of 22 candle power there is required the use of approximately 1.6 gallons of additional gas oil in the manufacture of water-gas of a higher candle-power to be mixed with such coal-gas.

39. In the course of the process of this enrichment there [fol. 4002] is derived a tar credit amounting to approximately 0.25 gallons of tar per thousand cubic feet of gas made, which had a market or sale price of 4 cents per gallon as of October, 1919.

40. In the manufacture of coal gas there is also required the use of iron oxide, city water and incidental minor materials, and the expenses of the handling of the materials.

41. In the manufacture of coal-gas there is also required the cost and expense of gas-making labor, the cost of expense of repair labor, the cost and expense of repair material, te elements of miscellaneous works expense and the item of expenses in connection with gas storage at the works and distributing holders.

42. During the year 1918, under the prices of labor and materials at that time in force the cost of coal-gas manufacture (exclusive of gas storage expense) was 33.95 cents per thousand cubic feet of gas made in the plants of the Astoria Light, Heat & Power Company, and during the eight months ending August 31, 1919, the cost of coal-gas manufacture (exclusive of gas storage expense) under the prices of materials and labor at that time in force, was 47.31 cents per thousand cubic feet of gas made in the plants of the Astoria Light, Heat & Power Company.

43. It is impossible on the record in this case to make any finding as to the cost of making coal-gas in the plants of the complainant company at the 14th and 42nd Street plants during the year 1918 or during the first eight months of the year 1919.

44. On the basis of the ratio of 22 per cent. coal-gas and 78 per cent. water-gas obtaining in the manufacture [fol. 4003] of gas supplied to the consumers of the complainant company, the average station cost of such gas, as of September 1, 1919, including the cost of gas storage, was not less than 47.09 cents per thousand cubic feet of gas made and not less than 50.63 cents per thousand cubic feet of gas sold. The average station cost of such gas at this time is not less than 50.63 cents per thousand cubic feet sold.

45. Prior to the year 1906 the officers of the complainant company concluded in good faith that the time had arrived when further extensions of gas manufacturing plants on

Manhattan Island would not be permitted and it was absolutely essential that manufacturing facilities be established elsewhere. In accordance with this conclusion the complainant company caused to be organized the Astoria Light, Heat & Power Company and caused to be erected at Astoria, Long Island City, two coal-gas units and the one water-gas unit above described, and the complainant company also caused a tunnel to be built from the works at Astoria to the Borough of The Bronx to convey gas to the Borough of Manhattan, which tunnel was constructed by the East River Gas Company, which had built the so-called Ravenswood tunnel prior to the acquisition of any stock interest in the East River Gas Company by the New Amsterdam Gas Company, or in the New Amsterdam Gas Company by the Consolidated Gas Company. The franchises of the Consolidated Gas Company did not give it any right to construct a tunnel under the East River.

46. During the year 1918, the complainant company sold to its consumers 18,029,245,000 cubic feet of gas, and during the first eight months of 1919 sold to its consumers 12,253,567,100 cubic feet of gas. The total sales of the [fol. 4004] complainant company during the year 1919 were at least 18,500,000,000 cubic feet, and during the year 1920 the sales of the complainant company will amount to at least 19,000,000,000 cubic feet.

47. In the manufacture and sale of gas, a percentage of the gas made is lost, due to condensation, differences in temperature at the consumers' meters, slow meters, leaks and the like. I find that unaccounted for gas reasonably represents approximately 7 per cent. of of the gas made and that in calculating the requirements of the complainant company, that figure should be used as a basis for computation.

48. The consumption of gas and its sale varies from time to time, depending upon the weather. The low mark of gas sales is found in the warm summer months, and the peak or maximum demand is found in the winter months. The complainant company must therefore be prepared not alone to make sufficient gas to meet a total annual demand but must be prepared to meet a maximum day's demand.

49. Upon the basis of 7 per cent. unaccounted for gas, the complainant company should have a rated daily manufacturing capacity of at least 108,500,000 cubic feet, allowing for reasonable reserve capacity.

50. At the present time the complainant company has the following plant capacities per day:

(a) Twenty-first Street, 28,500,000 cubic feet;
(b) Ninety-ninth Street, 5,500,000 cubic feet;
(c) Fourteenth Street, 5,000,000 cubic feet;
(d) Forty-second Street, 4,500,000 cubic feet, in addition to which it has available the capacity of the Astoria plant of 50,000,000 cubic feet, making a total of 93,500,000 cubic feet daily capacity.

[fol. 4005] 51. If the Fourteenth and Forty-second Street Plants were discarded, it would be absolutely necessary for the complainant company to find equal plant capacity elsewhere at a cost not less than the present book cost and value of those stations.

52. In making up its present deficiency of plant capacity, the complainant company has been using 10,686,000 cubic feet of the manufacturing plant capacity of the water-gas plant of the New York Mutual Gas Light Company. Pursuant to the agency agreements, an interchange of gas takes place between the complainant and the Standard and New Amsterdam companies, as the result of which the complainant is sometimes a debtor and sometimes a creditor company, on account of the gas so interchanged.

53. An additional 30,000,000 cubic foot water-gas unit is at present being constructed in connection with the plant of the Astoria Light, Heat and Power Company, under a contract calling for its completion on or before December 1, 1920, at an approximate expense of $4,500,000 for the additional structures, apparatus, equipment, connections and the like required for the installation and operation of such 30,000,000 cubic foot water-gas unit. The use of the 10,686,000 cubic feet of manufacturing plant capacity of the New York Mutual Company, hitherto used by the complainant company, will be discontinued upon the completion and operation of the new water-gas unit at Astoria.

I have, therefore, excluded from consideration, in determining the investment in manufacturing plant, used in the manufacture of gas sold by the complainant company, the $2,198,377.35 representing the investment in the portion of the plant of the New York Mutual Com-
[fol. 4006] solidated Company, and have included, in lieu thereof, one-half of the additional investment required for the new water-gas unit in course of construction at the Astoria plant.

54. I find that it is absolutely essential, for the purpose of meeting the demands of its consumers, that the complainant company use all of the four plants on Manhattan Island above described as well as all of the plant facility now at Astoria and at least half of the additional facility now under construction, or in place thereof other plant capacity, and I also find that in connection with the use of the Astoria plant, the complainant company must use the so-called Astoria tunnel for the purpose of conveying gas from Astoria to Manhattan.

55. In arriving at the cost of taxes, there must be included not alone the manufacturing plants on Manhattan Island, but also the present manufacturing plant at Astoria and the tunnel conveying gas from Astoria to Manhattan, and in addition thereto, taxes on one-half of the additional plant facilities now under construction at Astoria or other plant facility to that same extent.

56. I find that the average cost of taxes applicable to the manufacture and distribution of one thousand cubic feet of gas, whether that figure be arrived at by excluding the Fourteenth and Forty-second Street plants but including other plant capacity in place thereof to an equal amount and including all of the present Astoria plant, and the Astoria tunnel and one-half of the additional unit now under construction at Astoria, or by including the Fourteenth and Forty-second Street plants and all of the existing Astoria plant, together with the tunnel and one-half of the additional facilities, or by excluding the Fourteenth [fol. 4007] and Forty-second Street plants, but including the present Astoria plant and all the additional 30,000,000

cubic foot plant, to be not less than seven and one-half cents (7½¢) per thousand cubic feet of gas sold.

57. There must also be added to the cost of making and distributing gas the cost of maintaining the Astoria Tunnel. I fix this cost at not less than one cent (1¢) per 1,000 cubic feet of gas sold.

58. I find the average cost of renewals and replacements which must be added to the cost of gas to be three cents (3¢) per thousand cubic feet of gas sold.

59. In addition to the items heretofore referred to, there must be added to the cost of gas to the consumer various items entering into the cost of distribution, including distribution superintendence, supplies and expenses, meter and installation work, work on consumers' premises, repairs on street mains, repairs on services, repairs on meters, repairs on buildings (branches, street departments, shops, etc.), repairs on tools (street departments, shops, etc.), repairs on gas appliances, public street lighting, commercial expenses, salaries, general office, supplies and expenses general office, legal expense, claims and arrears, insurance, vacation and sickness, contribution to employees' mutual aid society, superannuation, stable expense, automobile expense, claims for damages, uncollectible bills, interest on consumers' deposits, use of distributing system and miscellaneous general expenses, and I find that if the operation of the Astoria plant be combined with the general operations of the plaintiff company that the cost of all of these items will not be less than twenty cents (20¢) per thousand cubic feet of gas sold.

60. Included in the cost of distribution are various items, such as commercial expenses, having to do with the sale [fol. 4008] and rental of appliances and the like, resulting in miscellaneous operating revenue to the complainant company. In 1918 the miscellaneous operating revenue represented 7.28 cents per thousand cubic feet; for the first eight months of 1919 this same revenue showed 6.62 cents per thousand cubic feet. The reasonable average would appear to be 6.95 cents. I, therefore, find that 6.95 cents per thousand cubic feet should be credited against the cost of making and distributing gas on account of miscellaneous revenue.

61. I find the total cost of the gas delivered to consumers by the Consolidated Gas Company to be at least 82.13 cents per thousand cubic feet, from which should be deducted 6.95 cents for miscellaneous revenue, making the net cost of gas delivered to the consumer 75.18 cents per thousand cubic feet.

62. I find the average selling price of gas, including that sold to the City of New York at 75 cents per thousand cubic feet, to be 79.91 cents per thousand cubic feet, showing a net profit to the complainant company, as of September, 1919, of not more than 4.73 cents per thousand cubic feet of gas sold.

63. Exclusive of working capital, I find the fair value of the property used and needed in the manufacture, transmission and distribution of the quantity of gas required by the consumers of the complainant company, as of January 1, 1919, and since that date, and on which it is entitled to have a fair return computed, to be at least the sum of $71,054,351.14, arrived at as follows:

Property other than particularly specified	$38,675,393.99
Franchises	7,781,000.00
Astoria property	17,169,342.57
Astoria tunnel	5,178,614.58
One-half the cost of the new 30,000,000 unit	2,250,000.00
Total	$71,054,351.14

[fol. 4009] 64. That the complainant Consolidated Gas Company owns and uses in its gas business, and did so own and use on December 31, 1918, and ever since, the following parcels of real property within the Borough of Manhattan and The Bronx, in the City of New York, used and useful in its gas business, and included in the first item of the property referred to in finding No. 63 above:

Station	Block No.	Lot No.
Hester St. Office	239	1 and 5
General Office Bldg.	870	47 and 60
14th St. Holder Station	989	1
14th St. Station	982	13
" "	988	1
" "	991	1 and 47

Station	Block No.	Lot No.
E. 17th St. Yard	985	7, 19, 20
21st St. Station	951	35
" "	952	7, 29, 30 and 35
" "	953	1
" "	978	5 and 6
" "	979	1 and 27
" "	987	37
42nd St. Station	1089	1
" "	1090	23
" "	1107	7
44th St. Holder Station	1092	7 in part
" " "	1093	9 " "
57th St. Office Bldg.	1028	38
E. 63rd St. Holder Station	1457	6
W. 65th St. Yard	1177	21
W. 65th St. Holder Station	1157	1
99th St. Works	1670	1
" "	1692	1
E. 111th St. Yard	1683	18
E. 111th St. Holder Station	1682	8 and 11
E. 111th St. Garage and Storage Yard	1704	5
E. 111th St. Dock Property	1712	2
3rd Ave. Commercial Office	1642	32 and 33
W. 132nd St. Holder Station	1998	50-3-4-5-6
" " "	1999	1
E. 132nd St. Tunnel Head and Storage Property	2583	360
W. 159th St. Meter Shop	2108	23
Kingsbridge Holder Station	3236	1

65. That the values upon the above-stated parcels of land (unimproved) owned by the complainant company, by the taxing authorities of the City and State of New York, [fol. 4010] as of October 1, 1918, for the levying of taxes for the year 1919, were respectively as follows:

Block No.	Lot No.	Value
239	1	$90,000
239	5	37,000
870	47	21,000
870	60	410,000

Block No.	Lot No.	Value
989	1	155,000
982	13	326,000
988	1	390,000
991	1	180,000
991	47	56,000
985	7	178,000
985	19	6,500
985	20	6,500
951	35	53,000
952	7	292,000
952	29	11,000
952	30	24,000
952	35	35,500
953	1	526,000
978	5	17,000
978	6	365,000
979	1	430,000
979	27	6,000
987	37	105,000
1089	1	900,000
1090	23	82,500
1107	7	375,000
1092	7	231,000
1093	9	228,775
1028	38	400,000
1457	6	145,000
1177	21	265,000
1157	1	815,000
1670	1	630,000
1692	1	245,000
1683	18	80,000
1682	8	10,000
1682	11	445,000
1704	5	355,000
1712	2	52,500
1642	32/33	48,000
1998	50	22,000
1998	53	7,000
1998	54	7,000
1998	55	7,000
1998	56	7,000

Block No.	Lot No.	Value
1999	1	165,000
2583	360	67,000
2108	23	21,000
3236	1	200,000
		$9,531,275

[fol. 4011] In addition to the foregoing, the Astoria Light, Heat and Power Company owns and uses, and did own and use on December 31, 1918, and ever since, land in the Borough of Queens, of which the value (unimproved) determined and assessed by the tax authorities of the City and State of New York, as of October 1, 1918, for the levying of taxes for the year 1919, was $2,438,910, making a total of $11,970,185 of assessed value of land (unimproved).

66. That the values stated in finding No. 65 represented the opinion of the respective Deputy Tax Commissioners as to the amounts of money for which such parcels would sell under ordinary circumstances, if wholly unimproved; that such values were assessed and determined on that basis, and do in my judgment represent at least the sums for which such parcels would so sell under such circumstances.

67. The plant, machinery and equipment used in the gas business of the complainant company have been and are maintained in excellent operating condition; proper repairs, renewals and replacements have been made; and the same are now in as high a state of efficiency as if new.

68. I find that the present cost of reproducing the property described in finding No. 63 above is largely in excess of the sum found by me; and I further find that the present value of the property described in finding No. 63, if based upon the reproduction cost less depreciation, would be in excess of the said sum of $71,054,351.14.

69. I find that the complainant company is entitled to include, in the amount upon which it is entitled to a fair re- [fol. 4012] turn, the sum of $3,800,000 for working capital.

70. I find the total amount on which the complainant company is entitled to have a fair return computed, including

working capital, to be $74,854,351.14. On the basis of a daily plant capacity of 108,500,000 cubic feet and 18,500,000,000 cubic feet of sales, the sum of $74,854,351.14 is slightly in excess of $4.00 per thousand cubic feet, and on the basis of 19,000,000,000 cubic feet, a few cents less than $4.00 per thousand cubic feet. I find that $4.00 per thousand cubic feet of gas sold fairly represents the actual investment in property used in the manufacture, transmission and distribution of the gas sold by the complainant company, and such investment may, for the purposes of this case, be taken to be at least that sum.

71. During the twelve months ended December 31, 1918, the eight months ended August 31, 1919, and the twelve months ended October 31, 1919, the operating revenues of the gas business of the complainant company were not sufficient to pay the reasonable and necessary costs of the manufacture, transmission and distribution of gas and provide a reasonable return upon the value of the property owned and used by the complainant in the manufacture, transmission and distribution of the gas sold by it to its consumers.

72. On the basis of my finding of a net profit of not more than 4.73 cents per thousand cubic feet of gas sold and approximately 19,000,000,000 cubic feet of sales for the year 1920, the complainant company's return, if any, will be not more than $898,700, representing no more than 1.2 per cent. upon the fair value of the property used and needed as hereinbefore found, or amounting to a fair and reasonable return upon no more than $11,233,750 of the fair value of the property used and needed as hereinbefore found.

[fol. 4013] 73. The reasonable and proper rate of return upon the capital invested in the plants, distributing system, properties and business of the complainant company I find to be not less than eight (8) per cent per annum, amounting to $5,988,348.09, calculated upon the fair value of the property used and needed as hereinbefore found.

74. I find that the complainant company has complied with the provisions of Chapter 125 of the Laws of 1906 with reference to candle power and the requirements of law regarding pressure.

75. Under the construction which the courts of the State of New York have placed upon the provisions of Section 72 of the Public Service Commissions Law of the State of New York (People ex rel. Municipal Gas Company v. Public Commission, 224 N. Y. 156), the Public Service Commission of the State of New York for the First District, which otherwise would have plenary power over the rates of the complainant Consolidated Gas Company, has been given no power of jurisdiction to fix, or to authorize the complainant to charge, a rate in excess of the 80-cent rate fixed by Chapter 125 of the Laws of 1906, the said Section 72 of the Public Service Commissions Law providing that the Commission may not fix or authorize a rate for gas in excess of such rate as may have been fixed by statute.

76. Various matters comprised within the issues referred to me by the order of May 16, 1919, I have discussed in greater detail in a separate opinion which is herewith submitted and made a part of this report. It is my intention that the facts, and the conclusions regarding the law, set forth for reasons of convenience in that separate document, shall be deemed a part hereof, with the same force [fol. 4014] and effect as though they had been physically incorporated in this report.

77. I recommend that it be adjudged and decreed that Chapter 125 of the Laws of 1906, in so far as it provides that the complainant Consolidated Gas Company of New York shall not charge or receive for gas manufactured, furnished or sold by it, a sum per thousand cubic feet, in excess of a rate of eighty cents per thousand cubic feet, is illegal and void, because in contravention of Section 10 of Article 1 of the Constitution of the United States and the Fourteenth Amendment to the said Constitution, and that the complainant Consolidated Gas Company of New York have the other and further relief against the defendants in this suit which is asked for in the complaint herein.

All of which is respectfully submitted.

Abraham S. Gilbert, Special Master.

Dated New York, May 5, 1920.

[fol. 4015] UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF NEW YORK

In Equity. 15-358

CONSOLIDATED GAS COMPANY OF NEW YORK, Plaintiff,

against

CHARLES D. NEWTON, as Attorney General of the State of New York; Edward Swann, as District Attorney of the County of New York, State of New York, and Lewis Nixon, Constituting the Public Service Commission of the State of New York, for the First District, Defendants

Opinion of the Special Master

This action was instituted by the complainant against the defendants the Attorney-General of the State of New York, the District Attorney of New York County, and the Public Service Commission for the First District, for a decree declaring Chapter 125 of the Laws of 1906 unconstitutional because confiscatory of the complainant's property; the basis of this claim being that the maximum selling price of eighty cents per thousand cubic feet allowed by statute does not net the complainant a fair return upon the value of the property necessarily used in the manufacture and distribution of gas to consumers in the Borough of Manhattan, City of New York.

[fol. 4016] The action was referred to me as Special Master by order of Honorable Julius M. Mayer, dated the 16th day of May, 1919. The order appointing me provided that I should proceed promptly to the hearing of the testimony and continue the hearing of the cause from day to day, and if necesary for the prompt completion of such hearings, that I hold two sessions each day until the completion of the taking of testimony and evidence. I was orally directed, however, by the District Judge to allow the defendants until the 15th day of July, 1919, to prepare for trial. Since that date, I have sat almost continuously with the exception of such occasions as I have deemed it proper to grant short adjournments to counsel and on two occasions when I found it necesary to be away from the city. A great

mass of testimony has been taken. The record consists of approximately 16,000 printed pages, excluding exhibits which have not yet been printed. It is important, therefore, that I give the Court reviewing my report a statement of the basis upon which my report has been made, and the manner in which I reached the conclusions set forth.

In accordance with the requirements of the order of May 16, 1919, and the accustomed practice in the trial of rate suits in equity in this district, I submitted to counsel for all of the parties, on April 19, 1920, a preliminary draft of my report and of this opinion as well. On April 28, 1920, I received from all counsel informal written statements embodying their suggestions or criticisms regarding the matters covered by this preliminary draft. Thereupon I have proceeded to complete and file my report and opinion in its present and final form, which alone is to be taken as completely embodying my findings and conclusions.

[fol. 4017] Organization and Capitalization of Complainant

The complainant company was organized in 1884 by the consolidation of six gas companies then doing business in the City of New York. These gas companies had been in business for many years. One of them had been organized as far back as 1823. The property owned and used by these companies in 1884 had been purchased from time to time, covering a period of fifty or sixty years or more prior to the time of consolidation. Some of the property purchased was waterfront property at a time when the high-water mark of the East River was much further west on Manhattan Island than it is to-day, so that considerable of the land which was in occupation by the gas companies in 1884 was made land, as the result of filling in and reclaiming land under water then part of the East River. These various gas companies had from time to time obtained franchises of various character from the State and from the City for the laying of pipes and mains and for the doing of business; they were unrestricted as to price and conducted their business without regulation by the State. The stock of the various companies therefore became valuable property, and in the summer of 1884 the quoted value of the stock of these six companies in the aggregate was $39,078,000.

Whether Chapter 367 of the Laws of 1884 was the result of a scheme to combine and consolidate the various gas companies of the City of New York, or whether the scheme to consolidate these companies was conceived as a result of the passage of Chapter 367 of the Laws of 1884 I am unable to say. The probability is that Chapter 367 of the Laws of 1884 came into existence because of the scheme to consolidate the various gas companies.

[fol. 4018] However that may be, Chapter 367 of the Laws of 1884 was passed on May 28, 1884, and quite soon thereafter the plan to consolidate the various gas companies in the City of New York was instituted. Originally, it was planned to combine seven companies, the six referred to by me in my report, and a seventh, the New York Mutual Gas Light Company. The total capitalization originally proposed was $45,000,000. It was found, however, that the New York Mutual Gas Light Company, incorporated in 1866, was prevented from entering into the merger because of a prohibition in its charter. That company therefore was dropped from the plan, the amount which had been figured as applicable to that company deducted, and the balance of the capital, $39,078,000, was figured as the authorized capital of the company upon the basis of the actual market value of the shares of the constituent companies at that time.

The statute (Chapter 367 of the Laws of 1884) provided that:

"the amount of capital, the number of shares of the stock into which the same is to be divided (which capital shall not be larger in amount than the fair aggregate value of the property franchises and rights of the several companies thus to be consolidated, but which may be increased in accordance with the provisions of the Act entitled * * *) and the manner of distributing such capital among such consolidated corporations or the holders of the stock of the same, with such other particulars as they may deem necessary."

be stated in the agreement and certificate of incorporation.

The statute further provided that the agreement should not be deemed an agreement of the corporation so propos- [fol. 4019] ing to consolidate until after it had been sub-

mitted to the stockholders of each corporation. Thereupon a committee was appointed for the purpose of appraising the various plants and agreeing upon their value. This committee employed Thomas F. Rowland, an engineer experienced in the construction of buildings and apparatus of this character, to appraise the plants. It is quite clear to my mind that Rowland's appraisal did not include the land and did not embrace any examination of meters, services or other property on consumers' premises. However that may be, all of the parties agreed upon certain valuations for real estate, plants, etc., of the various companies aggregating $29,994,000 and they also agreed upon a value for franchises and rights of $7,781,000, making a total of $37,775,000 of stock to be issued, allowing a balance of $1,303,000 for working capital.

Stock to the aggregate of $37,775,000 was thereupon issued in purchase of the assets of the six constituent companies appraised as above stated, except that $2,329,000 was retained in the treasury of the complainant company to retire obligations of a like amount of said constituent companies which might be a lien on the property, and $15,940 was retained for the purpose of making sundry adjustments pursuant to agreement; the balance of $35,430,000 being issued directly to the shareholders of the constituent companies.

Value in 1884 of Property Acquired by Complainant

It is impossible for anyone to say at this time that the property, assets and franchises transferred by the constituent companies to the complainant company were not of the "fair aggregate value" fixed at that time.

Counsel for the defendants, particularly the learned At- [fol. 4020] torney-General, attempted to show the exact cost of these various properties to the constituent companies. I think they absolutely failed in that attempt. There is no evidence that the constituent companies paid anything for the franchise rights. I am inclined to believe that the actual cost of the various tangible properties to the constituent companies was less than their appraised value in 1884; but as I have already stated, there is no evidence in this case which would justify a finding that the values fixed for the purpose of consolidation in 1884 did not represent

the fair value, at that time, of the property acquired by the complainant. However that may be, the complainant company did pay, in the par value of its stock, the price agreed on, and for thirty-six years that agreement fixing that price has remained undisturbed.

In 1885 the Legislature of the State of New York through the Senate appointed a committee to investigate this consolidation. The committee employed counsel and an accountant, received a great mass of testimony and evidence, and made two reports, one being signed by John I. Gilbert, chairman of the Committee, the other being signed by Thomas W. Robinson and Michael C. Murphy—Senator Gilbert evidently believed the complainant company to have been over-capitalized; the majority of the Committee, however, appear to have reached a contrary conclusion. But no action was ever instituted by the State challenging the incorporation of the complainant company; no effort was ever made by the State in any proper proceeding to prove that the property transferred to the complainant company on consolidation was not worth the price agreed on, and the public, through thirty-six years, has been led to believe, by inactivity on the part of the State, that the stock issued by the complainant company on organization was in compli- [fol. 4021] ance with Chapter 367 of the Laws of 1884, and was for property "the fair aggregate value" of which was the amount paid in par value stock therefor.

The complainant company began business on the 10th or 11th of November, 1884. In April, 1900, the capital stock was increased to $54,595,200. In July of that year it was further increased to $80,000,000. Today it has an authorized capital stock of $125,000,000, of which there is issued and outstanding $100,000,000. It has also issued and outstanding 7 per cent convertible bonds to the extent of $25,000,000. In the years between 1884 and 1918 the complainant company acquired by purchase practically all of the stock of the New York Edison Company, doing an electric light and power business; the United Electric Light & Power Company, doing a similar business; the Brush Electric Company; the New Amsterdam Gas Company; the Standard Gas Light Company, and other gas and electric companies. The New Amsterdam Company, practically all of the stock of which is owned by the Consolidated Com-

pany, in turn owns all the stock of the East River Gas Company and of the Central Union Gas Company. The Central Union and the New Amsterdam Companies each own about one-half of the stock of the Northern Union Gas Company. The complainant company also owns more than 76 per cent of the stock of the New York Mutual Gas Light Company. It also owns all of the stock of the Astoria Light, Heat and Power Company, to which I shall presently refer. Through its stock control it has a monopoly of the gas and electric business in the Borough of Manhattan, City of New York.

[fol. 4022] Should Earnings of the Electric Lighting Business Offset Losses of the Gas Business?

Counsel for the defendants strenuously insist that in determining whether the complainant company earned or could earn a fair return upon its necessary capital, I should take into consideration the fact that the complainant company monopolizes the gas and electric business in this territory, and the profits earned by the complainant company by reason thereof, offsetting any losses there may be in the gas business by profits from the electric business. Counsel stressed the point that the testimony showed that the electric lighting companies owned by the complainant company were very active in the exploitation of electricity and their efforts to induce consumers to use electricity, rather than gas, and the extension of the use of electricity, the complainant company was put to it to keep up the demand for gas, through the development of new industrial and domestic uses for gas, to take the place of uses for which electricity has proved more popular and suitable. Of course the situation would have been precisely the same in this respect if entirely separate interests controlled the electric business. The two classes of business, however, are closely allied and I appreciate a certain force in the argument presented to me. But the Courts of this state and the defendant Commission alike have declared the law to be that a public utility is not required to sell one of its products at a loss because it sells another product at a reasonable rate or at a profit. Even if the same company sells both gas and electricity, which is not the fact as to the complainant, it is constitutionally entitled to charge reasonable rates for each,

and electric consumers could not be made to bear the bur- [fol. 4023] dens of a confiscatory rate for gas (Municipal Gas Company v. Pub. Serv. Comm., 225 N. Y. 89). The rate for electricity within the City of New York is regulated by the defendant Public Service Commission for the First District, and it is presumed reasonable unless and until the contrary has been shown in a proper proceeding (Municipal Gas Company v. Public Service Commission, supra). Under the authorities, the complainant company appears entitled to have the rate chargeable by it for gas kept adequate, without regard to the rate charged for electricity by companies in which it owns stock control. Moreover, the Legislature has seen fit to provide separate regulation of gas and electric lighting companies. It has not regulated a lighting and heating company as such. It has itself fixed a certain price for gas supplied in the Borough of Manhattan, and has said that the price of electricity shall be regulated by the Public Service Commission. I therefore ruled throughout the trial that I would not take proof as to profits derived from the electric business as bearing upon the losses sustained in the gas business.

Manufacturing Plants Used in the Complainant's Gas Business

Upon organization the complainant came into possession of a number of gas manufacturing plants, some making coal-gas and some water-gas. Of these plants only four remain; the 14th and 42nd Street coal-gas plants and the 21st and 99th Street water-gas plants. The total maximum daily gas capacity of these four plants is 43,500,000 cubic feet a day, but for some years past the 14th and 42nd Street coal gas plants have not been regularly operated. They have been fired up every winter in anticipation of a possible demand which would require an output at those plants, but except for the winters of 1919 and 1920, very little gas has been made in these two plants for some years, so that [fol. 4024] the complainant company for some years past has only manufactured in its own plants a maximum of approximately 34,000,000 cubic feet. In 1918, out of a total of over 18,000,000,000 cubic feet of gas sold, it only made in its own plants about 8,000,000,000 cubic feet, the balance of the gas coming from the New York Mutual, the New

Amsterdam and Astoria companies. During the first eight months of 1919, out of a total of over 12,000,000,000 cubic feet sold, a little over 4,000,000,000 feet was made by the complainant company, the rest coming from other sources.

The New Amsterdam Company has a manufacturing plant at Ravenswood, Long Island, and brings its gas over to Manhattan by way of a tunnel called the "Ravenswood Tunnel" which was built by the East River Gas Company, all of the stock of which is owned by the New Amsterdam Company, practically all of the stock of the latter company, as I have already stated, being owned by the Consolidated Company. The New York Mutual and Standard Gas Companies make gas on Manhattan Island.

Some time prior to 1906, the complainant company caused to be organized the Astoria Light, Heat and Power Company, and that company purchased a large tract of land at Astoria, Long Island City, and constructed from time to time coal and water-gas units until it had in operation for some years prior to 1918:

Unit A, coal-gas, with a rated daily capacity of	10,000,000 cu. ft.
Unit B, coal-gas, with a rated daily capacity of	10,000,000 " "
Unit C, water-gas plant, which originally had a daily capacity of 20,000,000 cubic feet and was subsequently increased to	30,000,000 " "

[fol. 4025] Contracts Under Which Gas is Procured from Other Companies

The Consolidated Company apparently caused or procured the East River Gas Company to build a tunnel known as the Astoria Tunnel from Astoria to a point in the Borough of The Bronx, in order to convey the gas made by the Astoria Company across the East River and thence to Manhattan. For some years prior to 1918 the complainant company had the problem of keeping all of these plants working. The complainant company entered into what it called "agency agreements" with the Standard, the New York Mutual and the New Amsterdam, pursuant to which there was an exchange of gas between the Consolidated Company and its subsidiaries on the basis of

station cost plus ten per cent.; and the complainant company also made an agreement with the Astoria Company, pursuant to which it agreed to take all of the output of the Astoria Company at station cost, plus taxes, insurance, administration and other expenses, and 7 per cent. return on property investment.

Subsequent to the original arrangement with the New York Mutual Company that agreement was amended so that for several years past in addition to cost plus ten per cent., the Mutual Company has been paid by the Consolidated Company a return on investment, on the theory that the Consolidated Company actually used a certain part of the plant capacity of the Mutual Company.

Of course, all these agreements made by the complainant company with its subsidiary companies are practically agreements made with itself and must be very closely scrutinized. So far as the agreements between the complainant company and the New Amsterdam, Standard and [fol. 4026] Mutual Companies, which provided for a cost plus ten per cent. basis, there can be no criticism. That was unquestionably a fair basis. Nor is the amended Mutual agreement to be criticized. A rather different situation is presented as to the Astoria Company. That company is operated under the direct control of the complainant company, virtually as a "manufacturing department" of the complainant, to adopt the phrase of Mr. Maltbie, who testified for the defendants. During 1918 and 1919 gas production at Astoria was curtailed somewhat by the United States Government's use of a part of the coal-gas plant for carbon manufacture for war purposes in 1918, the recurring inability to obtain adequate deliveries of bituminous coal, and, during the summer periods of "off-peak" demand for gas, the adjustment of Astoria production so as not to interfere too much with the continued operation of the Manhattan plants and the permanency of their labor forces. The operating executives of the complainant testified that it was more economical and highly advisable to keep the 99th Street and 21st Street plants going to a lessened capacity during mid-summer, even though this involved curtailing the possible production of gas at Astoria.

The general method pursued by the complainant company in the operation of its business and in the keeping of

its books has been to charge as an operating expense the cost of the gas which it obtained from other companies. This cost from the Astoria Company included a percentage of cost of maintaining the various tunnels and return on investment thereon, and the books, records and accounts of the complainant company present, therefore, a most complicated system requiring close analysis and allowing, as accounts of this kind usually do, a variety of conclusions drawn by various experts representing the different interests.

[fol. 4027] Plant Capacity Required for Complainant's Consumers

In reaching a conclusion in this case, therefore, I have not attempted to follow the paths of any of the parties to the action. The outstanding feature of the case to me has been that this complainant company is under obligation to sell a twenty-two candle power gas in the quantities demanded by its consumers.

The complainant company must be prepared to make between 18 billion and 19 billion cubic feet of gas this year and must be prepared to make and send out probably 100,000,000 cubic feet of gas in one day before the end of this year. To make this quantity of gas requires plant capacity. The complainant company now has a plant capacity on Manhattan Island of 43,500,000 cubic feet daily. It has a plant capacity in Astoria of 50,000,000 cubic feet and is now constructing an additional 30,000,000 cubic feet water-gas plant so that it will have in all 123,000,000 cubic feet maximum daily capacity or about 23,000,000 cubic feet more than it will probably need on any one day in 1920 or in 1921. But the witnesses all agree that in extending a gas plant the reserve capacity must be somewhere between 20 per cent. and 25 per cent. and that when this reserve capacity gets down to about 5 per cent., additional capacity must be provided. It is expected that this additional gas plant in Astoria will be in operation in time to meet the winter demand of 1920, so that at that time all of the gas required by the complainant company can be made at Astoria and at the four manufacturing plants on Manhattan Island.

[fol. 4028] The 14th and 42nd Street Plants

Counsel for the defendants insisted that the 14th and 42nd Street plants were not used or useful and should be disregarded in all my calculations.

I agree with the complainant company that it probably could not have secured a permit to build any more manufacturing plants on Manhattan Island, and was therefore compelled to go to Astoria.

In my opinion it was not bad judgment for the Consolidated Gas Company to retain the 14th and 42nd Street coal-gas plants. The evidence submitted would tend to show that there is a real danger of a shortage in gas oil, in which event the complainant company will find itself compelled to look to the coal-gas plants, and if these plants had been discarded, other plant capacity would have been required.

Proof of Required Quantities of Materials and Labor

The methods of making coal and water-gas, the kind of material necessary, the character of labor required, and the character of residuals produced were conceded. Quantities and prices, however, were disputed.

Bearing on this question, I had the testimony of Mr. Woods, an expert engineer with many years' practical experience, and also of Mr. Little. I also had before me the operating ledgers and other books of account of the complainant company and of the Astoria Company for the year 1918, and for the first eight or ten months of the year 1919. In connection with these books, testimony was adduced as to the manner in which they were kept. From time to time great quantities of vouchers of various kinds were brought into Court. The books themselves are kept [fol. 4029] in conformity with the rules and regulations of the Public Service Commission for the First District, which has regulatory powers over the plaintiff company under the Public Service Law of the State of New York. I personally visited the Astoria Works, accompanied by counsel for the various parties. I was convinced that these books accurately reflected the operations of the complainant company and the Astoria Company. They are kept in infinite detail.

Counsel for the defendants strenuously objected to my receiving these books in evidence. The defendants were afforded the fullest opportunity of not alone examining these books in advance of their being offered, but after they were offered, the defendants were afforded the opportunity of examining all the underlying data, vouchers, reports, receipts and other papers that might bear upon the accuracy of these books. Taken in conjunction with the testimony of Mr. Woods and of Mr. Little, as to the character and quantities of materials and labor necessarily used in the manufacture of gas, I think that the record shows beyond question just what, in the actual operation of gas plants, is required for the making of gas and the cost thereof.

Cost of Manufacture in 1918 and Eight Months of 1919

In my findings I have set out in detail the various elements entering into the manufacture of gas and it is unnecessary for me to refer to them again in this opinion. Suffice it to say that the books of the complainant company show that, excluding gas storage expense, the actual cost of making water-gas at its 21st and 99th Street plants in the year 1918, was 42.66 cents per thousand cubic feet of gas made, and for the eight months of 1919, it was 48.43 cents. The Astoria records show that for the year ending December 31, 1918, the actual cost of making water-gas in [fol. 4030] Astoria was 40.54 cents and for the eight months ending in August, 1919, was 45.75 cents. Mr. Woods figured the cost of water-gas in the month of October, 1919, at 47.07 cents. In some instances his cost of materials was somewhat higher than the average cost to the companies as appearing from the books for 1918 and 1919, and in some instances he estimated a somewhat larger quantity than actual operations showed was used. In this connection, it should be noted that the quantity used varies in the different plants, and sometimes in the same plant on different days. Having in mind that the plaintiff must prove its case beyond any reasonable doubt, I reached the conclusion that the safest basis upon which to work was the actual result of operations in the Astoria plant for the eight months ending August 31, 1919, that plant being a most efficient manufacturing plant with modern labor-saving de-

vices. The Astoria books of account, manufacturing records and supporting data for this period were placed in evidence by the defendants as a part of their case, and were tabulated and analysed by the defendants' accountants, as well as by the representatives of the complainant in rebuttal. On a basis of the prices and costs during that period of 1919, the actual cost of making coal-gas, excluding storage, was 47.31 cents. The actual cost of making water-gas was 45.75 cents. On the basis of the quantities produced the cost per thousand cubic feet of mixed gas was 46.40 cents per thousand cubic feet, and on the basis of 78 per cent. water-gas and 22 per cent. coal-gas prevailing in the gas sales of the complainant as of September, 1919, the cost was at least 46.09 cents per thousand cubic feet of gas made.

[fol. 4031] Increases in Manufacturing Cost Since Early 1919

To my mind it is impossible for anyone seriously to dispute that figure. I have therefore found as a fact that the cost of making gas at this time is not less than 46.09 cents plus one cent storage expense, making 47.09 cents for gas made. That was the average cost for eight months in 1919. Since that time the price of oil has gone up. The price of coal has gone up. The price of labor is constantly going up. Any figure beyond the figure shown by actual operation for the first eight months of 1919 would be speculative, and I have avoided basing any conclusions on fragmentary or incomplete data of operations. It is beyond the shadow of a doubt that the materials and labor going into the manufacture of coal and water-gas today, making allowance for the residuals produced, cost the complainant company, no matter how or where the gas is made, at least 47.09 cents per thousand cubic feet.

"Gas Unaccounted For

It is conceded by everybody in the case that a certain percentage of gas is lost; that is, it disappears by reason of leaks, slow meters, condensation, variations of temperature, and the like. The question as to the amount of this "unaccounted for gas," as it is called, was sharply liti-

gated. After listening to the testimony given by Mr. Woods and by the defendants' expert, Mr. Little, and after analyzing the various reports of the various companies and the experiences of various companies, and the explanations of Mr. Woods and the statements of Mr. Little with reference to it in this and other cases, I am satisfied that 7 per cent. for the gas made must be figured as unaccounted [fol. 4032] for gas. Upon this basis, therefore, the gas sold represents 93 per cent. of the gas made. The gas made costing 47.09 cents per thousand feet therefore represents, in my judgment, beyond any doubt, at least 50.63 cents per thousand cubic feet for gas sold.

Complainant's Claim as to Present Cost of Manufacture

Counsel for the complainant asks me to find the present station cost of gas sold to be 56.06 cents, on the basis of 22 per cent. coal-gas and 78 per cent. water-gas prevailing in the gas sales of the complainant company as of October, 1919. He reaches this figure on the basis of what he claims to be proof in the record as to the present cost of oil, coal and other materials. I am inclined to believe that he accurately states the figures upon the basis of actual prices paid in October, 1919, and upon some proof in the record as to contracts since made for oil. I have refused to find, as requested by him, because as indicated, I prefer to base my decision upon actual results of operation, with the additional statement that the cost today is substantially higher than it was during the first eight months of 1919.

Suggestions of Substitute Methods of Manufacture

Counsel for the defendant Swann offered the testimony of Mr. Little for the purpose of indicating how the complainant might make gas by the coke oven and chamber oven processes at a less cost than the present method of manufacture. I was much impressed with Mr. Little and the testimony given by him, but I do not think that this company can be required to invest, at this time of high prices and of labor difficulties, a very large sum of money in [fol. 4033] these methods of gas manufacture, with the possibility staring it in the face of not being able to sell

the greatly increased quantities of coke which would be produced as a result of such methods of manufacture; for it is conceded that unless Mr. Little's judgment is right as to the ability to sell coke, his plans must be disregarded.

In this connection it should also be noted that Mr. Little, on cross-examination, admitted that he would not advise the complainant's executives to undertake the installation of a plant of this character now or under the conditions prevailing for several years. Moreover, for several years the complainant company and the Astoria Company have experienced great difficulty in obtaining the quantity of bituminous coal required for their present mode of making coal-gas. They have received only about sixty per cent. of the quantity desired and contracted for by them. During the past winter, and at other times previously, the generation of coal-gas in the Astoria plants has had to be curtailed because of the inability to obtain coal. Under such circumstances, the introduction of a mode of manufacture depending on greatly increased quantities of coal in proportion to the gas produced for sale, has not commended itself to the complainant's executives.

Renewals and Replacements

We then have the question of renewals and replacements. Counsel for the complainant asks me to find that this item of expense is at least three and a half cents (3½¢) per thousand cubic feet. He contends that the record shows that the actual cost is about that figure. His contention, however, is based upon the renewals and replacements of the Manhattan plants. I think a better result will appear when the Manhattan and Astoria plants are combined; and in my [fol. 4034] judgment, as I have indicated in my findings, three cents per thousand cubic feet will fairly cover the item of renewals and replacements.

Expense of Maintaining Transmission Facilities

Another item which must be added to the cost of gas sold is the expense of maintaining the Astoria Tunnel. As

I have already pointed out the complainant company was practically forced to go to Long Island City to make its gas, and is therefor compelled to use a tunnel to convey gas to Manhattan. That tunnel is under water, requires a great deal of care and attention and constant repairs, with the necessary materials and labor. Based on the charge made by the Astoria Company for the year 1919, the cost of maintaining the tunnel is one cent per thousand cubic feet sold.

Present Cost of Taxes Levied by Public Authority

There must also be added to the cost of making and distributing gas certain taxes assessed against the complainant company. I have reported the tax item to be 7½ cents per thousand cubic feet. I reached that figure in the following manner:

The record shows for the year 1918 taxes assessed against the complainant company were as follows:

New York State Gross Earnings Tax	$78,473 86
New York City Special Franchise tax	384,297 90
New York City Real Estate of Corporations tax	155,122 20
New York City Real Estate tax	462,171 55
New York City Personal tax	23,300 00
United States Capital stock tax	24,807 38

[fol. 4035] For the year the Astoria Company had the following taxes assessed against it:

Real Estate	$345,953 30
Gross Earnings	31,516 10
Personal	11,157 41
Capital Stock	8,541 50
Excess Dividends over 4%	6,000 00
Special Franchise	321 73
Federal Income	192,594 01

If the plants be consolidated the gross earnings tax of the Astoria Company would be eliminated. Likewise the tax on excess dividends over 4 per cent. Likewise Federal Income tax. The capital stock tax of the complainant will

remain the same, leaving the following items to be taken as taxes assessed for the year 1918 on the entire property:

New York State Gross Earnings tax	$78,473 86
New York City Special Franchise tax	384,297 90
New York City Real Estate of Corporations tax	155,122 20
New York City Real Estate tax on Manhattan properties	462,171 55
New York City Real Estate tax on Astoria property	345,953 30
New York City Personal tax, Manhattan	23,300 00
New York City Personal tax, Astoria property	11,157 41
Astoria Special franchise	321 73
U. S. Capital Stock tax	24,807 38
To this must be added the tax on Astoria tunnel of	123,022 59
Making a total of taxes assessed, taking the year 1918 as the basis, of	$1,608,627 92

This divided by 19,000,000,000 cubic feet, which I take to be the maximum for 1920, gives 8.5 cents per thousand cubic feet. But counsel for the defendants contend, and I think correctly, that the item of $155,122 20 real estate of corporations tax must be disregarded. Mr. Sangster points [fol. 4036] out, that as against the item of $345,953.30 tax on real estate of Astoria for 1918, only $264,700.15 was paid, and in 1919 only $307,819.36 was paid. The record shows that franchise taxes are usually reduced. On the other hand, if the complainant be permitted to earn a fair return some tax items may be increased. On the same basis of 19,000,000,000 cubic feet for 1920, 7.5 cents per thousand cubic feet, gives me $1,425,000 as the tax item instead of $1,608,627.92, making a difference of $183,627.92.

It is impossible, I think, to figure the tax item any closer than I have done, I am convinced that in reaching the figure of 7.5 cents I have fixed a figure which, in all probability, experience will show to be the exact cost,—at any rate, so close to it as to be fair to both the public and the complainant company.

Cost of Distribution

"Cost of distribution," which must be added, covers many items under the Uniform System of Accounts, not all of which are strictly distribution costs. The complainant company does a very large business in the sale and renting of gas appliances, and in that connection much publicity and promotion work must be done. The cost of doing this work is included in the cost of distribution. One of the items in the list of items making up cost of distribution (salaries, general office) led to considerable argument on the hearing before me. The complainant company, as I have already indicated, is not alone a manufacturing but a holding company. It owns capital stock and securities of a number of other companies. It is contended on the part of the defendants that at least one-third of the general officers' salaries should be deducted because these gentlemen devote their time not alone to the affairs of this [fol. 4037] particular company but to the affairs of the companies the stock of which is owned by the complainant company. The officers of the complainant company on the other hand insist that they take no active part in the operation of any of the other companies; that the other companies have their own executive officers; that if this company sold all of the securities which it owns of other companies their work would be precisely the same and the expense of running the company would be precisely the same. I was not able to agree entirely with the contention of counsel for the complainant in this regard nor am I able to agree entirely with the claim of the defendants that this and some other items should be reduced one-third. There are some items, too, like legal expense and entertainment expense, that are disputed. It is difficult to know just where to draw the line. The entire cost of distribution in 1918 was 19.78 cents per thousand cubic feet of gas sold; for the first eight months of 1919, 21.10 cents; for the twelve months ended October 31, 1919, 22.09 cents.

Complainant's Claim as to Present Cost of Distribution

Counsel for the complainant company urges that I find the distribution cost, as of October, 1919, and the present time, to be not less than 23.30 cents per thousand cubic

feet of gas sold. Messrs. Carter and Woods, while on the stand as witnesses for the complainant late in the trial before me, gave testimony and presented computations by which they reached the conclusion that under present rates of pay and the present prices of materials and supplies, the distribution cost of 21.10 cents in early 1919 has become at least 23.30 cents. It is of course true that the Distribution Department has enjoyed no immunity from the [fol. 4038] effects of the mounting costs of labor and material, and I am inclined to believe that these witnesses accurately stated a ratio or extent of increase in costs which has taken place in this department since 1918 and early 1919. Clerk hire has gone up; stationery costs more; salaries of other employees have gone up, and on the whole, I believe, if fair allowance be made for all of the items in dispute, that in the business of this complainant company all of the items included under the head of distribution cost cannot possibly be kept below twenty cents per thousand cubic feet, and in reaching my figures, I have taken that figure as the cost of distribution. I have refused to find as requested by counsel for the complainant because, as indicated, I prefer to base my decision upon actual results of carrying on the business during periods for which complete figures are before me, with the additional statement that the cost today is substantially higher than it was in 1918 or the first eight months of 1919.

Deduction for Miscellaneous Operating Revenue

As against the various items making up the cost of distribution totaling 20 cents, there must be a credit arising out of miscellaneous operating revenue, such as rent from gas appliances, profit on the sale of gas appliances, and other items which in 1918 aggregated 7.28 cents per thousand cubic feet and for the first eight months of 1919 showed 6.62 cents. I have taken an average of 6.95 cents as warranted by all the evidence.

[fol. 4039] Compliance with the 22 Candle-power Statute upon the hearing before me the contention was made by the defendants that the complainant company had violated the provisions of Chapter 125, Laws of 1906, as to candle power and as to pressure.

The statute under consideration requires the complainant to furnish to its consumers gas of an illuminating power of not less than twenty-two sperm candles of six to a pound burning at the rate of 120 grains of spermaceti per hour tested at a distance of not less than one mile from the distributing holder by a burner consuming five cubic feet per hour; and it was claimed by the defendants that this provision of the statute was violated by the complainant in that it did not furnish the quality of gas required by the statute. In support of their contention, the defendants offered in evidence and I received, the sworn reports of city inspectors of the calculated results of observations made by them at two city testing stations, as well as certain test sheets showing the basis of their computations. This proof covered the years 1916 to 1919, inclusive. As to part of this period, namely, the time during which the United States War Department stripped the gas of the light oils, the gas furnished to consumers was concededly of less than twenty-two candle power; but as to this period, I find as a fact that the complainant company acted under compulsion in time of war, and that were it not for the action of the United States Government officials the gas would have been in conformity with the statute.

As to the balance of the time, I am satisfied that the complainant made every effort to comply with the statute. [fol. 4040] There were some days when the gas did not test up to twenty-two candle power; but this may have been caused by conditions not to be foreseen and it may have been due to the unreliability of the tests made. I am not at all satisfied that the city inspectors were in all cases correct in their observations. The gas was not tested in the manner which the statute seems to require. It is unnecessary for me to go into the details of this gas testing. Much depends on the accuracy of the vision of the testing observer. It appears to be conceded that in order to make a twenty-two candle power gas it should be made of a twenty-three and a half candle power at the works. I am satisfied that the gas made by the complainant company was always at least twenty-three and a half candle power. In this connection I was much impressed with a report made by Mr. Hine when connected with the Public Service

Commission, as a result of which an order was made by the Public Service Commission on the 13th day of October, 1917. Accompanying the order of the Commission (Case No. 2235) is an opinion by Mr. Oscar S. Straus, the Chairman, in which he refers to the work done by Mr. Hine. I quote from the opinion of Mr. Straus:

"By authorization of the Commission Mr. W. F. Hine, its Chief Engineer, has established testing stations throughout the city and from January to the present time (tests were made from January 1st to August 31st), has supervised tests in these stations, as well as secured the results of tests conducted in testing stations maintained by the city under procedure agreed to. The result of these tests, down to and including August 31st, are set forth in Exhibit 1 herein."

Exhibit 1 shows that between January 1st and August 31st, 1917, at the Grand Street testing stations 87 tests [fol. 4041] were made on Branch 1; 86 on Branch 2 and 87 on Branch 3, and the average candle power as to each branch was 22 or over, the highest being 24.2 and the lowest being 19.4. At the 79th Street testing station 133 tests were made on Branch 3; 132 tests on Branch 4 and 132 tests on Branch 6, the average of all was 22.6 candle power, the highest being 24.3 and the lowest being 20.5. At 59 Walker Street, 162 tests were made which showed the highest candle power 24.9, the lowest 19.8 and the average 22.2. At all testing stations Consolidated gas was tested 819 times, the highest test showing 24.9, the lowest 19.4, and the average 22.3. I have accepted this report of Mr. Hine as being more reliable than the tests produced in evidence, and I therefore have found as a fact that the complainant company has complied with this standard requirement of the statute.

The Candle-power Standard Useless and Wasteful

In this connection I feel called upon to say that the record in this case discloses the fact that this candle power standard has no place on our statute books. It is agreed by everybody that the 22 candle power requirement is a useless requirement, wasting the money of this company,

and of the public. In no other place is this requirement in vogue. Since electricity has come to be used as it has for illuminating purposes, gas is no longer considered an illuminant but is used for heating rather than for lighting purposes. The important quality of gas therefore is its heating power, not its illuminating power. The time has come (in fact had arrived many years ago) when this statute should be repealed and the matter left with the Public Service Commission to determine the heating quality of the gas to be furnished to consumers. It will [fol. 4042] cost less to make a gas of heating quality accepted in most jurisdictions than it does to make a 22 candle power gas, and the quicker the standard is changed the sooner will the public be able to get gas at a price less than must necessarily be charged at this time for 22 candle power standard if a reasonable return is to be allowed the complainant company.

Compliance with Pressure Requirements

It was intimated on the hearing before me, though not alleged, that the complainant company in some manner had violated the pressure requirements of the statute. It was also intimated, though not alleged, that the complainant company had also violated some order of the Public Service Commission as regards pressure. No order of the Public Service Commission on this subject was produced. The only proof offered was through the witness Edgerton who attempted to testify to something he saw at the pumping stations from which he wanted to draw the inference as to conditions in the service mains. This proof I declined to take. There is no evidence in this case that the complainant company did not comply with the pressure requirements of the statute or of any order of the Public Service Commission.

The General Office Building

Another matter which I should perhaps refer to in this opinion is the question of the general office building at 15th Street and Irving Place. That building was erected

some years ago with the idea apparently of having a home for the general offices of the complainant company. It has a large auditorium where meetings are held; a restaurant on the top floor for the accommodation of employees [fol. 4043] and tenants; a central telephone exchange; rest rooms and other conveniences of that character. The cost of constructing this building compared with present conditions was very modest. The complainant company, in accounting for revenues from the building and expense of operation follows the theory of dividing the invested capital between the gas making business and non-gas business on the basis of the portion of the building occupied by other tenants and prorates the expense of operation accordingly. The defendants contend that the entire building should be taken in as invested capital and the account be credited with all of the receipts of rent from other tenants and in addition thereo insist that the space used for auditorium, restaurant and the like should be rented out so as to increase the revenues and profits of the building. I have given this matter a good deal of thought and I believe that the fairest way of handling the situation is the way it has been handled by the complainant company. The net cost to the complainant for office space is less than it would have to pay if it rented space in a building owned by some one else. I see no ground for disturbing the figures of the complainant company with regard to the 15th Street building.

The 57th Street Branch Office and Display Room

The learned Attorney-General took exception to the 57th Street office building and offered evidence tending to show that the branch office at 57th Street could have been handled more cheaply in some other way. I believe the officers of the complainant company reached the conclusion they did in good faith and that the cost to the consumer is no more than it would be if the company had hired office space in a building not owned by them in that neighbor- [fol. 4044] hood. I have declined therefore to interfere with the judgment of the officers of the complainant company in that regard.

Other Parcels Contested by Defendants

Leaving aside for the time being the 14th and 42nd Street plants which are claimed by the defendants not to be useful in the gas business, and which I have already discussed, there are some other pieces of real estate which the defendants insist should not be continued in the fixed capital account. If these parcels were all thrown out of calculation it would make no material difference in the net result. The company officials insist that every piece or parcel still owned by the company is used and useful. There is evidence supporting the contention of the complainant company, and I decline to substitute my judgment for the judgment of the operating officials of the complainant company.

Reasonable Rate of Return

The question of the amount of the return to which the complainant company is entitled was sharply litigated before me. The United States Supreme Court in deciding the suit brought by this company in 1906 (Willcox v. Consolidated Gas. Co., 212 U. S. 19) rather indicated that 6 per cent. was then a fair return on the value of the property used in complainant's gas business. Since the decision of the prior suit in 1909, there has been a very radical change in business conditions. The investment market of the world is on an entirely different basis than that under consideration by the Court in 1909. Taking into consideration all of the factors which the Courts have indicated as entering into the determination of a reasonable and proper [fol. 4045] rate of return (upon capital employed in supplying gas to the public, I am of opinion that this complainant company is entitled to receive a return of at least eight (8%) per cent. on the value of the property used in its gas business.

The Value of Property

As to the value of property the Supreme Court of the United States in the prior suit of this complainant said:

"There must be a fair return upon the reasonable value of the property at the time it is being used for the public" (p. 41),

and further on, on the same page, the court says:

"In order to determine the rate of return on the reasonable value of the property at the time it is being used for the public, it, of course, becomes necessary to ascertain what that value is. A very great amount of evidence was taken before the Master upon that subject, which is included in five large volumes of the record. Valuations by expert witnesses were given as to the value of the real estate owned by the complainant and as to the value of the mains, service pipes, plants, meters, and miscellaneous personal property.

"The value of real estate and plant is to a considerable extent matter of opinion, and the same may be said of personal estate when not based on the actual costs of material and construction. Deterioration of the value of the plant, mains and pipes is also to some extent based upon opinion. All these matters make questions of value somewhat uncertain; * * *"

The Value of Franchises and Rights

As I read the opinion of the court in that case, the Court refused to disturb the value of $7,781,000 agreed upon as [fol. 4046] representing franchises. I quote from page 47:

"We think that under the above facts the courts ought to accept the valuation of the franchises fixed and agreed upon under the Act of 1884 as conclusive at that time. The valuation was provided for in the Act, which was followed by the companies, and the agreement regarding it has been always recogniezd as valid, and the stock has been largely dealt in for more than twenty years (now thirty-four years) past on the basis of the validity of the valuation and of the stock issued by the company."

Unless therefore there is force in the contention made by counsel for the Public Service Commission that one of the principal franchises included in this valuation has expired and that therefore that value no longer exists, I feel bound to accept that value of $7,781,000 for franchises.

The Claimed Expiration of the "Anthracite Grant"

Counsel for the Public Service Commission points out that included among the franchises transfered to the complainant company on organization was a franchise to the Anthracite Gas Lighting and Heating Company. That

company was organized under the General Manufacturing Act of 1848; it obtained from the State a perpetual franchise to operate in the City of New York, subject to obtaining a license or franchise from the City of New York to lay its mains and pipes in the city streets. By resolution of the Common Council of the City of New York adopted September 17, 1863, it was granted "the right to lay pipes and mains" for a period of fifty years. Counsel for the defendants contend that this license expired in 1913; [fol. 4047] but since then the complainant company has maintained its pipes and mains in the streets, and, so far as the record shows, has relaid pipes and mains where necessary; no action has been taken by the City of New York to disturb the complainant's rights in the streets, and, so far as the record indicates, the City of New York still acquiesces in the complainant's rights therein. So long as the complainant is enjoying possession of the rights granted and is not disturbed, I think that for the purpose of this case the right must be deemed to be existent as if it had been extended or renewed by formal resolution, and that it must still be included as one of the franchises for which a value of $7,781,000 was fixed in 1884.

Standard of "Value of Property" in Rate Cases

This brings me to the question of the value of the remaining property, including operating plants, mains, services and the like. The cases speak of the value of the property but fail to differentiate between one kind of value and another. Property has different kinds of value; it has a scrap value; it has a going value; it has a peculiar value to a person desiring to purchase; it has a rather different kind of value where the property is condemned for public use and the owner is compelled to build a new plant elsewhere, and in case of fire. In the case of a fire loss or a condemnation of the property for public use the owner of the property is at once confronted with the problem of replacing the plant and his loss undoubtedly is the cost of reproduction new at that time, less observed or actual depreciation. But in a case of this character that rule would be unfair to the public.

In fact, the complainant did not undertake, for the pur- [fol. 4048] poses of this case, to prove the present reproduction cost of its property, which it said would be in excess of $150,000,000. As to its land unimproved, it presented the testimony of the Deputy Tax Commissioners of

the City of New York, the officials chosen by civil service examinations to make valuations of real property and sworn to assess such land at the full sums for which it, or similar parcels, would, under ordinary circumstances, sell, if wholly unimproved. Aside from this $11,970,185. of present value of land, the complainant contended itself on its direct case by showing the inventories and appraisals made of its properties in 1906 for the prior suit, the unit prices applied then to the properties inventoried, and the extent to which the properties then inventoried are now in existence and use by the complainant. Proof was then offered showing that the present unit prices for such materials, labor, and the like, are substantially higher than those used in 1906. On this basis, I was asked to find that the present reproduction cost of the property used in 1906 and still in use is at least as much as the sum at which it was appraised in 1906, and that property added since 1906 is now worth at least as much as it cost when erected and installed. Although I have no doubt that the present reproduction cost would be at least as much as the sum thus arrived at, for the reasons elsewhere indicated I feel on sounder and fairer ground in basing my conclusions upon the actual investment in the property, proof of which was offered in the first instance by the defendants and by the complainant in rebuttal.

Cost of Plants per Unit of Capacity

The various properties owned and used by the complainant company were acquired from time to time over a long [fol. 4049] period of years; a considerable part of them since 1884. For several years past the cost of labor and materials has been such that to reproduce the property of the complainant company, even with allowance for any deferred repairs and maintenance and deferred renewals and replacements of property, sometimes referred to as "observed depreciation," would cost very much more than the actual investment of the complainant company in these properties. As far back as 1886, Mr. Edgerton figures a water-gas plant worth about $150 per thousand cubic feet capacity, and a coal-gas plant at some $225 to $250. Apparently engineers through the years have figured a water-gas plant, excluding land, as worth about $150 per thousand cubic feet of daily capacity, and a coal-gas plant about twice as much. The testimony in this case was to the effect that a coal-gas plant now costs from two to three

times as much as a water-gas plant. Several times as much land is required for a coal-gas plant as for a water-gas plant. Mr. Woods, the engineer of the defendant company, figuring the value of the New York Mutual plant for the purpose of inter-company adjustments long before the question came before me, fixed the value of the New York Mutual plant on Manhattan Island, including land, at $35.72½ per thousand cubic feet.

Actual Investment Not in Excess of Cost of Such Plants Before the War

The actual investment of the Astoria Company, exclusive of working capital, is in excess of $15,460,000. Included in this is about $3,300,000, representing the original cost of the land (plus grading and filling), and of the construction of docks, wharves, and the plant railroad, leaving as the actual original cost of building the Astoria gas-plant, long [fol. 4050] prior to the world war, about $12,160,000, exclusive of land. This sum represents about $375 per thousand cubic feet of capacity for coal-gas units and about $150 per thousand cubic feet of capacity for the water-gas units. That is to say, taking 20,000,000 daily capacity for the coal-gas at $375 per thousand cubic feet, we get $7,500,000 and taking 30,000,000 cubic feet at $150 we get $4,500,000, making a total of $12,000,000 exclusive of land, the additional amount of $160,000 being for facilities which would be useful for contemplated extensions to the plant.

The 29th and 21st Street water-gas plants, exclusive of land, represent about $172 thousand-cubic feet of capacity. The fact that one of these stations has a capacity of about 5,500,000 would tend of course to raise the average cost per unit of capacity above that of such a plant as the 30,000,000 cubic foot water-gas plant at Astoria. The investment in the 14th and 42nd Street coal-gas plants, exclusive of land, amounts to about $356 per thousand cubic feet of capacity. Compared with the Astoria coal-gas units, the relatively smaller capacity of these plants tends to a higher unit cost per unit of capacity, which, however, is more than offset by the greater investment in labor-saving equipment at the Astoria plant.

In other words, the original investment in the complainant's plants is not in excess of what such plants cost before the war. The total investment in the plant and property, including that for which stock was originally issued, but exclusive of franchise rights and working capital, after

making a deduction for what is described as "jointly used property" owned by the complainant, is $38,673,393.99. On the basis of daily plant capacity of 43,000,000 cubic feet and only 10,000,000,000 cubic feet in sales that figure is slightly less than $4 a thousand cubic feet of sales. The [fol. 4051] fact is, that figured in various ways, $4 fairly represents the value of necessary manufacturing and distributing plant for one thousand cubic feet of gas sold.

Present Value of Property Owned and Used by Complainant

I am convinced that no matter how depreciation is figured on the cost of reproducing this property, and no matter what criticism be made as to the age of the 14th and 42nd Street plants, the fact remains that those plants are going, gas-producing plants, and that the 21st Street and 99th Street plants are gas-producing plants, and based entirely upon the capacity of the plants alone, plus the extent of the street mains, services, and other property, by no possibility could this property be reproduced, less depreciation, on any theory, for $38,675,393.99, made up as follows:

Real estate (including $3,119,634.26 for General Office Building)	$10,647,962 94
Manufacturing plants and holder stations	13,119,754 76
Services	1,272,241 74
Street mains	11,027,266 24
Meters	3,719,442 12
Cocks and connections	359,322 12
Furniture and fixtures	532,437 54
Horses, wagons and harness	5,747 80
Tools and implements	149,335 26
Scows	15,821 20
Gas appliances rented	1,711,935 46
Automobiles and accessories	137,412 82
	$42,697,780 00
Less portion of General Office Building and other property owned by complainant but jointly used by others	4,022,386 01
Total	$38,675,393 99

[fol. 4052] Reasons for Rejecting "Present Reproduction Cost" and Claimed Deduction for "Theoretical Depreciation"

In arriving at the value of the property necessarily used in the gas business of the complainant company, I have rejected the testimony and suggestions of the witnesses for the defendants that I ought to take the investment in the property, less a large amount for "theoretical depreciation." Much has been said and written on this subject, and I have read with interest the matter which has been called to my attention. I cannot escape the view that a property used for the service of the public in the operation of a public utility such as a gas company, if kept in good operating condition, must, in the nature of things, be worth to the public at least the amount honestly and reasonably put into the property. Nor can I escape the conclusion that any other method of arriving at the value of the property used in the public service must tend to unfairness, either to the consuming public or to the investors in the public utility corporation.

Take the case under consideration: I have found that, starting with the value of the property as fixed and agreed upon in 1884 and the issuance of stock at par upon that basis, and adding to that sum the amounts expended from time to time in installing new apparatus and facilities in existing plants and constructing new plants and facilities, and then deducting therefrom the cost of the property withdrawn from service since 1884, there is actually and reasonably invested in property used in the gas business of the complainant no less than $71,054,351.14, exclusive of mobile or floating assets, commonly called working capital. The plant, machinery and equipment used in the gas business of the [fol. 4053] complainant company has been and is maintained in excellent operating condition; proper repairs, renewals and replacements have been made from time to time, and the same are now in as high a state of efficiency as if new. From every point of view which concerns or affects the consumers, the property for which this $71,054,351.14 was paid is rendering the same service today, and in some instances a little better service, than was contemplated or

secured at the time the money was put in. Nevertheless, counsel for the defendants insistently urge that all return must now be withheld from a large part of that investment, and the amount of investment arbitrarily reduced, merely because some of the plants or some of the property in them have been in existence for some years. The complainant company, on the other hand, would find justification in the decisions of the Courts for a contention that the value of this property must be taken as of the present time and that I must fix this value upon the expert opinion as to the cost of reproducing the property as of the present time, in which event there would arise the question whether from such reproduction cost should be deducted the amount of any observable and actual deterioration or depreciation.

"Present Reproduction Cost" Basis Unreliable and Unjust to Public or to Company

If the complainant urged the present reproduction cost basis and I adopted that view, I would be compelled, in the first instance, to rely upon the testimony of hired experts on either side expressing views as to value—a method always unsatisfactory, at any rate to me,—and in addition thereto, I would find myself compelled to fix the value of the property at this time at a sum largely in excess of the [fol. 4054] actual investment as above found. I feel that to do this would be unfair to the public, because on such a basis the consumer would be called on to pay the complainant company a rate yielding a return upon an amount of money never put into the property by investors, but representing only an appreciation in the cost of building such a property now, due to the conditions prevailing at this time.

On the other hand, if this suit were on trial in a time of low values and low construction costs, such as prevailed for a period immediately before the Great War, it might well be that the expert testimony would have called for a conclusion that on a reproduction cost basis the property used in the complainant's gas business was in such a time worth less than the actual investment therein. Here, again, the use of such a basis of present value would lead to an unjust result, this time to the complainant company,

and to the investors in the property. Their money would be still in the project, and would have been expended in good faith for new construction at prices reasonable at the time when the work was done.

I am of the opinion that in cases of this character the value of the property used must be controlled by considerations less fluctuating and more closely allied with the interests of the consumer and investor alike. The value can remain substantially stationary only if it be correlated to actual, reasonable and honest investment. The costs of actually making and distributing the gas must, of course, fluctuate with the cost of materials and labor and the rate of return must vary with investment conditions, but if we once adopt a sound and ready means of ascertaining the value upon which the rate should yield a return, it becomes [fol. 4055] a simple matter to readjust from time to time the rate charged so as to reflect changed costs of labor and materials and any changes in the proper rate of return.

Is the Present Price Level "Abnormal"?

Counsel for the defendants strenuously urge that we are now living in abnormal times. To some extent, I assent to that proposition, but the proof indicates that what some persons still refer to as abnormal times has become to others a high, new, normal level, which will continue for a comparatively long time to come. It is impossible to forecast now any probable time when the pre-war level of wages and material costs will be restored. Where counsel for the defendants err in urging upon me the view that the price of gas should not be changed under present conditions, is in their failure to differentiate between the basis of valuing the property on which a return is to be allowed, and the basis of determining the actual cost of making and delivering the gas. Of course, as was pointed out by the learned Judge of the Court of Appeals who wrote for that Court in the Municipal Gas Company case, a mere temporary increase in the cost of production would not justify a destruction or suspension of the statute. No such situation is, however, presented here. As I have found on the basis of the prices, rates of pay, and costs prevailing during the eight months beginning January 1, 1919, the cost of making and

distributing gas has been such as to allow a very small, if any return, on even the actual investment; and since September 1, 1919, the cost of making and distributing gas has been increased in a number of respects so that the fair inference is that the complainant company now finds itself without any return upon the investment. The conditions [fol. 4056] found by me have existed for more than a year last past, and to a lesser degree for at least a year before that time, and will continue for at least a considerable period of time, the end of which cannot now be forecast.

The Sound Basis of Complainant's Right to Relief

Upon such a situation and such a prospect, I think that the complainant company has shown itself, clearly and beyond all reasonable doubt, entitled to relief from the statutory limitation on its rates, but that its rate of return should be calculated, not upon the present high reproduction cost of its property, with or without the deduction of observed or actual depreciation, in whatever manner computed, but upon the actual, reasonable investment in the property devoted to the service of the complainant's consumers. Taking the years as they come and go, of high construction cost and of low construction cost, the amount honestly and actually put into a plant and system of this character, represents a sum which fairly and reasonably should be taken as representing a minimum of its value to the public for use as a public utility. The only testimony offered before me to show the expenditure which would be necessary in order to put the plant, structures, machinery and equipment in condition substantially as good as when erected or installed, was that of Alten S. Miller, an engineer long familiar with these plants, now vice-president in charge of construction work for the Bartlett-Hayward Company of Baltimore. He testified that the outlay of approximately $322,000 for repairs, renewals and replacements would accomplish this result. For the reasons already reviewed, I have not considered this sum, or any other, as a proper deduction from the above-stated value of property.

[fol. 4057] Investment in Additional Property Required for Service of Complainant's Consumers

And it is upon this same basis that I have taken the value of the Astoria plant and Astoria tunnel. There apparently was actually invested in the construction of the Astoria plant as of December 31, 1918, $17,169,342.57 and in the tunnel $5,178,614.58.

In order to meet the requirements of the public it is necessary to have additional capacity. We must either add to the invested capital the amount that Mr. Woods figures for part of the mutual plant capacity or make allowance for the additional plant capacity at Astoria. As I have disregarded all of the plants except the Consolidated plants on Manhattan Island and the Astoria plant for the purpose of reaching a conclusion in this case, I believe that there should be added to the invested capital one-half of the expense of the new 30,000,000 foot plant at Astoria, which will cost $4,500,000, half thereof being $2,250,000. Adding these three items of Astoria plant, Astoria tunnel and half of the additional 30,000,000 cubic feet to the item of $38,675,393.99 for property other than franchises and rights and $7,781,000 for franchises and rights, gives a figure of $71,054,351.14.

Working Capital

In addition to these items it is conceded that the complainant is entitled to consider working capital as part of the invested capital. There was a sharp conflict between the witnesses as to the amount to be allowed for working capi- [fol. 4058] tal. Mr. Carter, an officer of the complainant company, testified that the working capital should not be less than $4,625,000, giving his reasons therefor. Witnesses called by the defendants testified to much lower figures, giving their reasons therefor. Mr. Little indicated that in his judgment working capital should represent about twenty cents per thousand cubic feet. For the purpose of determining the amount of working capital I have accepted Mr. Little's figure, which makes the working capital on the basis of 19,000,000,000 feet of sales as nearly as may be determined $3,800,000, making a total therefore of invested capital of $74,854,351.14 upon which the complainant is entitled to a fair return.

In Conclusion

It has been my purpose in this opinion to give the court reviewing my findings as simple and yet as clear a picture as I can of what I conceive to be the important questions in this case. The record, as I have stated, consists of over 16,000 printed pages of testimony, in addition to which there is a very large number of exhibits, some of the exhibits consisting of large volumes of account books of the complainant and Astoria companies. To take up every argument and point of discussion presented to me in the course of this very long and arduous trial would be practically impossible within any reasonable time. I have found, as stated, that the property of the complainant company is being confiscated to a very substantial extent. Every day that this continues, assuming the correctness of my conclusions, is an injustice to this complainant company. I have, therefore, deemed it my duty rather than to spend the time necessary to write a more detailed opinion, or to state the facts in greater detail than I have in my [fol. 4059] report, to present to the Court at the earliest possible moment my report and opinion in the form now prepared, to the end that such disposition may be made of this case as the Court reviewing my report and opinion may deem wise and proper.

Respectfully submitted.

Abraham S. Gilbert, Special Master.

Dated, May 5, 1920.

[fol. 4060] The opinion of Learned Hand, District Judge, upon the final hearing, dated August 4, 1920, and the supplemental opinion dated August 11, 1920, are reported in Consolidated Gas Company v. Newton, Attorney General, et al., 267 Fed. 231, 272.

The opinion of Learned Hand, District Judge, dated February 28, 1921, upon an application by the defendants for an extension of the time fixed by decree for turning over to the plaintiff the sums impounded, is reported in Consolidated Gas Company of New York v. Newton, Attorney General of the State of New York, et al., 274 Fed. 986.

The opinion of the United States Supreme Court rendered March 6, 1922, modifying and affirming 267 Fed. 231, 274 Fed. 986, is reported in Newton v. Consolidated Gas Company, 258 U. S. 165.

[fol. 4061] The judgment, order and decree made by Learned Hand, District Judge, as modified on August 11, 1920, is as follows:

[fol. 4062] UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF NEW YORK

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

CHARLES D. NEWTON, as Attorney General of the State of New York; Lewis Nixon, Constituting the Public Service Commission of the State of New York, First District, and Edward Swann, District Attorney of the County of New York, Defendants.

This cause came on to be further heard at the August, 1920, Term of this court and was argued by counsel: and thereupon, upon consideration thereof, it is

Ordered, adjudged and decreed that the decree of this court hitherto entered herein on the fourth day of August, 1920, be and the same hereby is amended so as to read as follows:

[fol. 4063] UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF NEW YORK

CONSOLIDATED GAS COMPANY OF NEW YORK, Complainant,

against

CHARLES D. NEWTON, as Attorney General of the State of New York; Lewis Nixon, Constituting the Public Service Commission of the State of New York, First District, and Edward Swann, District Attorney of the County of New York, Defendants.

This cause came on to be further heard at the July, 1920, Term of this court and was argued by counsel and thereupon, upon consideration thereof, it is

(1) Ordered, adjudged and decreed that the exceptions to the following numbered findings of the special master in his report proper filed herein May 6, 1920, are overruled:

One, two, three, four, five, modified by adding after the words "constituent companies," the words, "excepting certain expired rights to open streets for new mains," six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen substituting for the phrase, "have been kept in conformity with said rules and regulations" the phrase, "have been kept in substantial conformity with said rules and regulations," nineteen, [fol. 4064] twenty, twenty-one, twenty-two, twenty-five, twenty-six, twenty-eight, twenty-nine, thirty-three, forty, forty-one, forty-three, forty-five, forty-six, forty-eight, fifty, fifty-two, fifty-three substituting for the phrase, "have included in lieu thereof one-half of the additional investment required for the new water-gas unit", the phrase, "have included in lieu thereof and of the Fourteenth and Forty-second Street plants the whole of the additional investment required for the new water-gas unit", sixty-two modified by striking out the words, "showing a net profit with complainant company as of September 1919, of not more than 4.73 per thousand cubic feet of gas sold," sixty-six, sixty-seven, sixty-eight, seventy-one, seventy-five, seventy-seven. And it is

(2) Further ordered, adjudged and decreed that the other exceptions to the report of said master and to his opinion as incorporated in his report are sustained, and that there are substituted therefor as findings of fact and law the findings set forth in the opinion of Learned Hand, D. J., filed herein on August fourth 1920. And it is

(3) Further ordered, adjudged and decreed that Chapter 125 of the Laws of 1906 of the State of New York in so far as it prohibits the plaintiff herein from charging or receiving more than eighty cents per thousand cubic feet for the sale of gas in the Borough of Manhattan has been since January first, 1918, and now is confiscatory, and that said law deprives the plaintiff of its property without due process of law contrary to the Fourteenth Amendment to the Constitution of the United States. And it is

(4) Further ordered, adjudged and decreed that the said law since January first, 1918, has been and now is invalid, [fol. 4065] as violative of said Amendment, that the plaintiff has no adequate remedy at law for any injury resulting from the enforcement of said law except by injunction, and that it is entitled to the relief hereinafter prescribed. And it is

(5) Further ordered, adjudged and decreed that the defendants, Charles D. Newton, as Attorney General of the State of New York, Edward Swann, as District Attorney of the County of New York, and Lewis Nixon, constituting the Public Service Commission of the State of New York for the First District, their successors, agents, servants and employees, be, and each of them hereby is, restrained for a period of five years from the date of the entry of this decree from suing for any penalty or forfeiture described in Chapter 125 of the Laws of 1906, or from in any other way enforcing, or attempting to enforce, the said Act, or from taking any action under the Public Service Commission Law to enforce said Act; and it is

(6) Further ordered, adjudged and decreed, as a condition of the continuance of the injunction hereinbefore granted, that until March first, 1921, or until the earlier promulgation of a gas-rate applicable to the plaintiff by some competent authority of the State of New York, the plaintiff shall neither charge nor collect for the sale of gas in the City of New York more than the sum of One dollar and twenty cents per thousand cubic feet. And it is

(7) Further ordered, adjudged and decreed as a further condition upon the continuance of said injunction that until March first, 1921, or until the earlier promulgation of such gas rate by such authority the plaintiff shall on the fifteenth day of August, 1920, and on the fifteenth day of each succeeding month, pay to Richard Welling, Esq. (who is hereby appointed special master for that purpose), out of all [fol. 4066] moneys collected by it for sale of gas in the City of New York all sums in excess of eighty cents. And it is

(8) Further ordered, adjudged and decreed that the said special master shall deposit all moneys so paid to him,

equally in accounts in his name as special master in the New York Trust Company, the United States Mortgage & Trust Company, and the Title Guarantee & Trust Company at such interest as he can best obtain, to be withdrawn therefrom only upon order of this court. And it is

(9) Further ordered, adjudged and decreed that the said special master shall hold said moneys until March first, 1921, or until the earlier promulgation of such rate, as aforesaid, and upon the earlier promulgation of such rate the said special master shall on order distribute the moneys so collected with accrued interest, in accordance with such rate as though the same had been in effect from the date of the entry of this decree; but if no such rate shall have been promulgated on or before March first, 1921, then he shall pay over the sums so collected with accrued interest to the plaintiff. The said special master in either case to retain therefrom his expenses and allowance when fixed by the court. And it is

(10) Further ordered, adjudged and decreed that instead of making any payment or part payment to said special master in cash hereinbefore required, the plaintiff may at its option deposit with said special master Liberty Bonds of the United States or any other bonds in which savings banks are authorized to invest under the laws of the State of New York of a market value at the time of such deposit equal to one hundred and three per cent. of the payment [fol. 4067] or part payment for which they are substituted; said bonds to be held by said special master subject to the provisions in this decree marked (9), both as to their principal and any interest accruing thereon during the period of his possession, said interest to be apportioned per diem. And whenever the market value (less subsequently accrued interest) of such bonds shall be no more than the cash for which they are a substitute, the said special master is hereby directed to call upon the plaintiff to deposit with him additional bonds sufficient to make up one hundred and three per cent of such cash, and such deposit shall be a condition upon the further continuance of this injunction. And it is

(11) Further ordered, adjudged and decreed that the plaintiff may at any time withdraw on order any cash previously paid to the special master upon the deposit with said special master of such bonds to be held by him under the same terms as are applicable to the deposit of bonds in place of any original payment. And it is

(12) Further ordered, adjudged and decreed that instead of making any payment or part payment to said special master in cash hereinbefore required, the plaintiff may, at its option, file in court on order a surety bond in place of the same upon the following terms and conditions: All such bonds shall be executed by the plaintiff and by a surety company authorized to give bonds by the rules of this court. No surety company shall execute more than one bond and that in a sum no greater than $500,000. All bonds shall be conditioned in the payment of the sum in cash for which they are a substitute together with seven per cent. thereon until the time of payment. All such bonds shall be further conditioned upon the payment of the princi- [fol. 4068] pal and interest thereof in accordance with the provisions of this decree marked (9) or of any future modification thereof, and shall contain a provision that the same shall continue valid notwithstanding any future extension by decree of the period hereinbefore mentioned within which a new rate may be promulgated, and notwithstanding any further extension of payment resulting from any stay during the pendency of any appeal herein, and an other modification of this decree or of any stay in particular. Such bonds in the aggregate shall not at any time exceed two-thirds of the total payments then required by the terms of this decree. And it is

(13) Further ordered, adjudged and decreed that the plaintiff may on order at any time withdraw any moneys previously paid to the said special master upon filing any surety bond drawn as hereinbefore described. And it is

(14) Further ordered, adjudged and decreed that the foregoing provisions of this decree marked (9), (10), (11), (12), and (13) shall apply to all moneys collected by the plaintiff between July 1, 1920, and August 5, 1920, under the temporary injunction heretofore issued herein by the statutory court on June 28, 1920. And it is

(15) Further ordered, adjudged and decreed that at any time while the injunction hereinbefore granted shall remain in force, any party hereto, including the successor in office of any of the defendants, may apply upon notice at the foot hereof to vacate, modify, or extend the foregoing injunction because of any change of circumstances since the entry hereof; or for any additional relief to which he or it may become entitled. And it is

[fol. 4069] (16) Further ordered, adjudged and decreed that the plaintiff do recover its costs and disbursements when duly taxed of the defendants to be borne equally upon them, and that the allowance and expenses of Abraham S. Gilbert, Esq., the special master appointed to hear and report herein shall be fixed by the court upon motion made by any party hereto, or by the said special master, and shall be paid by the defendants equally, or upon their default, then out of the cash, bonds, or surety bonds hereinbefore described.

August 4, 1920.

Learned Hand, U. S. D. J.

August 11th, 1920.

[fol. 4070] PLAINTIFF'S EXHIBIT No. 886

Additions to and Withdrawals from the Property of The Astoria Light, Heat & Power Co. from June 1st, 1923, to December 31st, 1923

[fol. 4071] Additions

[fol. 4072] Astoria Light, Heat & Power Co.

Additions from June 1st, 1923, to December 31, 1923

Plant	$96,751 09
General Equipment	10,044 01
Furniture and Fixtures	5,879 09
Tools and Implements	11,388 72
	$124,062 91
Of the above amount, 80.074419% is devoted to the uses of the Consolidated Gas Co. of New York	$99,342 65

[fol. 4073] Astoria Light, Heat & Power Co.

Additions to Plant from June 1st, 1923, to Dec. 31, 1923, as Shown by the Books of the Company

Electric Power House Contents	$809 51
General Electric Distribution System	1,902 76
Railroad	8,060 26
" Equipment, Narrow Gauge	5,720 80
" " Standard "	4,764 96
Permanent Fresh Water System	973 20
Laboratory Contents	1,543 71
Storage Holder #2	2,422 68
Coal Handling App. Adjacent to Inclined Retort House	287 50
Horizontal Retort House Contents	2,857 34
Coal Handling App. Adjacent to Horizontal Retort House	287 50
Cyanogen Plant	15 48
General Connections	3,822 98
Sulphate of Ammonia Plant Contents	1,120 65
Coal Handling Apparatus, Coal Unloading Towers	40,455 38
Coal Handling Apparatus, Coal Storage Bridge	907 90
Boiler House #1 Contents	981 70
Pump House	23 26
Photometer and Calorimeter House Contents	154 00
Drip Oil Separating Tank	3,671 25
Engineering Dept	6,652 65
Sundry Expense During Construction	4,938 44
Office " " "	3,880 20
Repairs, tools and Implements During Construction	1,655 56
	$97,909 67
Discounts charged to Interest during Construction	1,158 58
	$96,751 09

[fol. 4074] Astoria Light, Heat & Power Co.

Additions from June 1st, 1923, to Dec. 31st, 1923

General Equipment, including Stable Equipment, Automobiles, Boats and Scows, as Shown on the Books of the Company	$10,044 01

[fol. 4075] Astoria Light, Heat & Power Co.

Additions from June 1st, 1923, to Dec. 31st, 1923

Furniture and Fixtures, including Mess Hall Contents, as shown on the books of the Company	$5,879 09

[fol. 4076] Astoria Light, Heat & Power Co.

Additions from June 1st, 1923, to Dec. 31st, 1923

Tools and Implements, as shown on the books of the Company	$11,388 72

[fol. 4077] Reconciliation of Additions

[fol. 4078] Astoria Light, Heat & Power Co.

Reconciliation of Additions

Additions to Plant from June 1st, 1923 to Dec. 31st, 1923, as shown in statement herewith	$96,751 09
Additions to Furniture and Fixtures from June 1st, 1923 to Dec. 31st, 1923, as shown in statement herewith	5,879 09
Additions to Tools and Implements from June 1st, 1923 to Dec. 31st, 1923 as shown in statement herewith	11,388 72
Additions to General Equipment from June 1st, 1923 to Dec. 31st, 1923 as shown in statement herewith	10,044 01
Omissions of Additions of items shown on Company Books, but included in Appraisal as of June 1st, 1923:	
Real Estate Assessments	93
Improvements on Real Estate	65,055 30
Luyster Creek Bulkhead	121,019 77
North Shore Crib Bulkhead	16,447 81

Electric Power House Contents	7,038 11
General Electric Distribution System	7,578 86
Mess Hall	638 43
Laboratory	1 97
Main Gate House and Gate	5,374 38
Luyster Creek Coal Handling Plant	259,827 38
Inclined Retort House Contents	1,389 50
Sulphate of Ammonia Plant Bldg.	6,082 06
"C" Generator House Contents	5,608 26
Coal Handling Apparatus, North of Generator House	2,197 07
"D" Generator House	5 36
"D" Generator House Contents	77,780 38
Tar Extractor House Contents	13 89
Fuel Handling Apparatus adjoining to "D" Gen. House	1,862 96
Ash Handling Apparatus adjoining to "D" Gen. House	385 00
"C" and "D" Exhauster House Contents	3 84
"C" and "D" Pump House Contents	1,445 10
General Connections	229 41
Boiler House #2 Contents	937 01
Photometer and Calorimeter House Contents	1,243 66
Oil Tanks	2,297 36
Additions as shown by the Company's Books from June 1st, 1923 to December 31st, 1923	$708,526 71

[fol. 4079] Withdrawals

[fol. 4080] Astoria, Light, Heat & Power Co.

Withdrawals from June 1st, 1923, to December 31, 1923

Automobiles and Accessories	$2,346 23
Tools and Implements	21,726 28
	$24,072 51
Of the above amount, 80.074419% was devoted to the uses of The Consolidated Gas Co. of New York	$19,275 92

2795

[fol. 4081] Astoria Light, Heat & Power Co.

The Bartlett Hayward Company, Baltimore, Md.

Building: Automobiles and Accessories:

Material	Quantity	Unit	Unit price	Total cost
Automobiles and Accessories, as shown on the books of the Company				$2,346 23

[fol. 4082] Building: Tools and Implements:

Tools and Implements, as shown on the books of the Company				$21,726 28

[fol. 4083] PLAINTIFF'S EXHIBIT No. 887

Summary Sheets Only

Additions to and Withdrawals from the Property of the Consolidated Gas Co. of New York from June 1st, 1923, to December 31st, 1923

[fol. 4084] Additions

[fol. 4085] Consolidated Gas Co. of New York

Additions from June 1st, 1923, to Dec. 31st, 1923, as Shown on the Books of the Company

Real Estate	$2,298,459 45
Plant	1,051,953 19
Street Mains	42,188 45
Services	80,617 59
Meters, Cocks, etc	162,773 87
Gas Appliances, Rental	179,122 88
General Equipment	45,146 99
Tools and Implements	42,746 75
Total	$3,903,009 17

[fol. 4086] Consolidated Gas Co. of New York

Additions to Plant from June 1st, 1923 to Dec. 31st, 1923

11th St. Station	$25,347 99
21st St. Station	1,003,787 76
44th St. Holder Station	30 10
65th St. Holder Station	5,840 65
99th St. Station	16,447 44
111th St. Holder Station	406 51
Kingsbridge Holder Station	92 74
Total	$1,051,953 19

[fol. 4087] Consolidated Gas Company

Withdrawals from June 1st, 1923, to December 31, 1923

Prices as of June 1st, 1923

Buildings	$25,267 36
Plants	84,528 27
Mains	18,707 74
Services	119,643 61
Meters, Cocks, etc	75,785 83
Gas Appliances	24,099 32
General Equipment	25,920 95
Tools and Implements	35,207 82
14th and 42nd Street Stations based on Mr. Robert Huntley's value of Land	11,209,842 09
	$11,619,002 90
Unamortized Investment in 42nd St. Plant	1,193,908 20
Total	$10,425,094 70

[fol. 4088] Value of Property of the 14th and 42nd Street Station of the Consolidated Gas Company of New York as of June 1st, 1923

Land—14th St. Station, as appraised by Mr. Robert Huntley	$1,547,055
Land—42nd St. Station, as appraised by Mr. Robert Huntley, except Block 1090, Lot 23	2,000,000

Land—42nd St. Station in Block 1090, Lot 23, owned by The Consolidated Gas Company, but not claimed in the gas business after Oct. 1st, 1923, as appraised by Mr. Robert Huntley	132,000
Buildings—14th St. Station, as appraised by Mr. H. R. Burt (Ex. 838)	776,180
Buildings—42nd St. Station, as appraised by Mr. H. R. Burt (Ex. 838)	796,100
Manufacturing Plant—14th St. Station, as appraised by Mr. A. S. Miller, (Exhibit 856, Page 9)	1,542,476
Manufacturing Plant—42nd St. Station, as appraised by Mr. A. S. Miller, (Exhibit 856, Page 9)	1,211,254
Omissions and Contingencies	137,687
Organization and Development prior to Construction (101 and G102)	530,000
Cost of Financing	560,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	580,281
Interest during Construction (G285)	1,087,055
Taxes during Construction (G284)	183,655
Administrative, Legal and Misc. General Expense during Construction (G282, G283, and G286)	126,099
Total	$11,209,842

No allowance has been made in the above for the value of the easement, franchise, going value or any other property not specifically mentioned.

[fol. 4089] Consolidated Gas Company

Withdrawals from June 1st, 1923, to December 31st, 1923

Priced as of June 1st, 1923

Buildings	$25,267 36
Plant	84,528 27
Mains	18,707 74
Services	119,643 61

Meters, Cocks, etc	75,785 83
Gas Appliances	24,099 32
General Equipment	25,920 95
Tools and Implements	35,207 82
14th and 42nd Street Stations based on Mr. Robert Huntley's value of Land, except Block 1090, Lot 23, as appraised by Mr. F. K. Stevens	11,213,322 00
	$11,622,482 90
Unamortized Investment in 42nd Street Plant	1,193,908 20
Total	$10,428,574 70

[fol. 4090] Value of Property of the 14th and 42nd Street Stations of the Consolidated Gas Company of New York as of June 1st, 1923

Land—14th St. Station, as appraised by Mr. Robert Huntley	$1,547,055
Land—42nd St. Station, as appraised by Mr. Robert Huntley except Block 1090, Lot 23	2,000,000
Land—42nd St. Station in Block 1090, Lot 23, owned by The Consolidated Gas Company, but not claimed in the gas business after Oct. 1st, 1923, as appraised by Mr. F. K. Stevens	135,000
Buildings—14th St. Station, as appraised by Mr. H. R. Burt (Ex. 838)	776,180
Buildings—42nd St. Station, as appraised by Mr. H. R. Burt (Ex. 838)	796,100
Manufacturing Plant—14th St. Station, as appraised by Mr. A. S. Miller, (Exhibit 856, Page 9)	1,542,476
Manufacturing Plant—42nd St. Station, as appraised by Mr. A. S. Miller (Exhibit 856, Page 9)	1,211,254
Omissions and Contingencies	137,687
Organization and Development Prior to Construction (101 and G102)	530,000
Cost of Financing	560,000
Engineering, Superintendence and General Contractor's Expense and Profit (G281)	580,281

Interest during Construction (G285)	1,087,535
Taxes during Construction (G284)	183,655
Administrative, Legal and Misc. General Expense during Construction (G282, G283 and G286)	126,099
Total	$11,213,322

No allowance has been made in the above for the value of the easement, franchise, going value or any other property not specifically mentioned.

(Here follow Exhibits Nos. 888, 889, 890, 891, and 892, marked side folio pages 4091, 4092, 4093, 4094, 4095, 4096, 4097 and 4098, 4099, 4100, 4101, 4102, 4103, 4104, 4105 and 4106, 4107, 4108, 4109, 4110, 4111, 4112, 4113, 4114, 4115, 4116, 4117, 4118, 4119, 4120, 4121, 4122, 4123, 4124, 4125, 4126, 4127, 4128, 4129, 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 4138, 4139, 4140, 4141, 4142, 4143, 4144, 4145, 4146, 4147, and 4148)

PLAINTIFF'S EXHIBIT NO. 688

COST OF THE PRODUCTION AND DISTRIBUTION OF ALL THE GAS SOLD BY THE CONSOLIDATED GAS COMPANY OF NEW YORK

FOR THE

YEAR ENDED DECEMBER 31ST, 1923.

(INCLUDING COST OF MATERIALS, LABOR, GENERAL EXPENSES, INSURANCE, MAINTENANCE, TAXES, ETC. PAID IN COST OF GAS PURCHASED, AND PAYMENTS MADE FOR THE USE OF THE PROPERTY OWNED BY OTHER GAS COMPANIES AND DEVOTED TO THE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS.)

NOTE - The figures herein relate to the cost of the quality of gas actually supplied during the year 1923, viz., an average of about 593 B.T.U. per cubic foot, (Min. B.M. page 6560). If gas of not less than 650 B.T.U. had been supplied during 1923, the costs stated herein would have increased at least 4.95 cents per thousand cubic feet of gas made (Min. B.M. p. 6560) or 5.19 cents per thousand cubic feet of gas sold.

4091

CONSOLIDATED GAS COMPANY OF NEW YORK

QUANTITIES AND COSTS OF MATERIALS AND LABOR - COAL GAS MANUFACTURE

(INCLUDING MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF COAL GAS PURCHASED FROM THE ASTORIA LIGHT HEAT AND POWER COMPANY)

YEAR ENDED DECEMBER 31ST, 1923.

Cost of Production - Coal Gas	Quantity	Quantity Per M.Cu. Ft. Made	Unit Price	Amount	Cost per M.cu.ft. Made
Caking Coal	396,172.54 gr.tons	197.3472 lbs.	$7.4720 per gr. ton	$2,975,125.55	$ .6583
Handling				122,725.49	.0271
Total Caking Coal				3,097,851.04	.6854
Residuals					
Coke	396,172.54 chalds.	0.0881 chalds.	5.5269 per chald.	2,200,868.53	.4869
Coal Tar	4,722,452 gals.	1.0449 gals.	0.0472 " gal.	222,900.52	.0493
Ammoniacal Liquor	143,116 lbs.	0.0317 lbs.	0.0097 " lb.	1,386.19	.0003
Cyanogen	536,089 "	0.1186 "	0.1894 " "	101,554.67	.0225
Ammonia	136,923 "	0.0303 "	0.0975 " "	13,345.95	.0030
" Sulphate	5,551,927 "	1.2284 "	0.0349 " "	193,974.22	.0429
Carbon	61,244 "	0.0136 "	0.1000 " "	612.44	.0001
Ammonium Concentrate	117,132 gals.	0.0259 gals.	0.1200 " gal.	14,055.65	.0031
Total Residuals				2,748,488.17	.6081
Deduct - Residual Expense				266,697.60	.0590
Net Credit from Residuals				2,481,790.57	.5491
Net Cost of Coal Carb'd				616,060.47	.1363
Bench Fuel - Coke	98,050,877 lbs.	21.6952 lbs.	0.3747 per C. lbs.	367,441.62	.0813
Boiler " Coal	764.40 gr. tons	0.3789 "	8.5776 " gr. ton	6,556.69	.0014
" " Coke	18,711,510 lbs.	4.1402 lbs.	0.3444 " C. lbs.	64,433.11	.0143
" " Water Gas Tar	1,178,967 gals.	0.2609 gals.	0.0478 " gal.	56,354.56	.0125
Labor Cartage etc. Handling				2,469.11	.0005
Total Coal Gas Fuel				497,255.09	.1100
Gas Oil	691,455 gals.	0.1530 gals.	0.0553 per gal.	38,204.17	.0085
Water	20,378,754 cu.ft.	4.5091 cu.ft.	1.00 " M.c.f.	20,378.75	.0045
Iron Mass	113,048 bus.	0.0250 bus.	0.2391 " bu.	27,034.82	.0060
Sundry Supplies				8,200.54	.0018
Labor, Cartage etc. handling Spent Material				4,025.84	.0009
Total Materials				1,211,189.68	.2680
Residuals - Water Gas Tar	124,284 gals.	0.0275 gals.	0.0467 per gal.	5,809.49	.0013
Drip Oil	4,163 "	0.0009 "	0.0563 " "	234.26	.0001
Total Residuals				6,043.75	.0014
Net Materials				1,205,115.93	.2666
Gas Making Labor				370,577.51	.0820
Electric Power House Operating				81,350.45	.0180
Total Materials and Labor				1,657,043.89	.3666
Repairs				532,231.13	.1178
Miscellaneous Works Expense				122,385.62	.0271
Total Cost of Coal Gas				$2,311,660.64	$.5115

Gas Made - cubic feet 4,519,479,000

CONSOLIDATED GAS COMPANY OF NEW YORK

QUANTITIES AND COSTS OF MATERIALS AND LABOR - WATER GAS MANUFACTURE

(INCLUDING MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE ASTORIA LIGHT HEAT AND POWER COMPANY, THE NEW AMSTERDAM GAS COMPANY AND THE STANDARD GAS LIGHT COMPANY)

YEAR ENDED DECEMBER 31, 1923

Cost of Production - Water Gas	Quantity	Quantity Per M.Cu. Ft. Made	Unit Price	Amount	Cost per M.Cu.Ft. Made
Generator Fuel - Coal	122,609.96 gr. tons	13.2651 lbs.	$10.4378 per gr. ton	$1,279,779.73	$ .0618
Coke	434,072,512 lbs.	20.4821 "	.3933 " O. lbs.	1,668,042.59	.0806
Boiler Fuel - Coal	20,375.94 gr. tons	2.2045 "	10.3550 " gr. ton	210,992.09	.0102
Coke	52,926,543 lbs.	4.0062 "	.3300 " O. lbs.	273,688.29	.0132
Water Gas Tar	9,721,967 gals.	.4696 gals.	.0478 " gal.	464,986.78	.0225
Labor, Cartage etc. handling				182,821.49	.0038
Total Water Gas Fuel				4,080,310.97	.1971
Gas Oil	77,203,902 gals.	3.7288 gals.	.0552 per gal.	4,265,372.89	.2060
Water	43,181,050 cu.ft.	2.0856 cu.ft.	1.00 " M.c.f.	43,181.05	.0021
Iron Mass	199,694 bus.	.0096 bus.	.2265 " bu.	45,221.96	.0022
Shavings	74,417 bus.	.0036 bus.	.0414 " bu.	3,080.76	.0001
Sundry Supplies				19,492.74	.0009
Labor, Cartage etc. Handling Spent Material				57,998.96	.0028
Total Materials				8,514,659.31	.4112
Deduct Residuals					
Water Gas Tar	14,255,794 gals.	.6885 gals.	.0475 per gal.	677,634.26	.0327
Drip Oil	578,730 "	.0289 "	.0604 " "	34,941.80	.0017
Total Residuals				712,476.06	.0344
Residual Expense				8,525.19	.0004
Net Credit from Residuals				704,150.87	.0340
Net Materials				7,810,508.44	.3772
Gas Making Labor				680,167.33	.0329
Electric Power House Operating				43,631.94	.0021
Total Materials and Labor				8,534,307.71	.4122
Repairs				751,678.75	.0363
Miscellaneous Works Expense				218,122.48	.0105
Total Cost of Water Gas				$9,504,108.94	$.4590

Gas Made - cubic feet 20,704,495,700

CONSOLIDATED GAS COMPANY OF NEW YORK

COST OF PRODUCTION

COAL AND WATER GAS

YEAR ENDED DECEMBER 31, 1925

	Cubic Feet	Amount	Cost per M. Cu.Ft.
Total Cost of Coal Gas Made - Brought Forward	4,519,479,800	$2,311,660.64	$ .5115
" " " Water " " " "	20,704,495,700	9,504,108.94	.4590
Total	25,223,975,500	11,815,769.58	.4684
Gas Storage	-	273,875.65	-
Repairs - 14th and 42nd Street		9,574.56	-
Total Cost of Production	25,223,975,500	$12,099,219.79	$ .4797

GAS ACCOUNT - CUBIC FEET

Gas on Hand Jan. 1st, 1925	52,666,000	
Gas Made	25,223,975,500	
Total	25,276,641,500	
Deduct, Gas on Hand Dec. 31, 1925	57,286,000	
Net Total to be accounted for	25,219,355,500	
Gas Sales to Consumers	24,057,694,200	
" Used by Company	75,447,600	
Unaccounted for due to condensation etc.	1,086,213,700	- 4.31%
	25,219,355,500	
Ratio of Sales to Make	95.36%	

CONSOLIDATED GAS COMPANY OF NEW YORK

COST OF PRODUCTION AND DISTRIBUTION

(ALL SUMS PAID AS RETURN UPON INVESTMENT IN PROPERTY OF OTHER COMPANIES USED FOR CONSOLIDATED GAS COMPANY HAS BEEN ELIMINATED FROM THIS STATEMENT OF COST, VIZ., A TOTAL OF $2,221,840.25)

YEAR ENDED DECEMBER 31, 1923.

		Amount	Cost per M. Cu.ft. Sold
Cost of Production (Brought Forward, Gas Sales cu.ft. 24,067,094,200)		$12,099,219.79	$ .5029
Cost of Distribution and Other Expenses			
Distribution, Superintendence, Supplies and Expenses		609,138.81	.0253
Gas Meter and Installation Work		498,615.90	.0207
Work on Consumers' Premises (Miscel)		626,525.92	.0260
" " " " Gas Supply and Inspection		100,101.06	.0041
Repairs of Gas Mains (Consol. Gas Co.)	$167,263.59		
Add Amount Paid to East River Gas Co.	37,950.38		
" " " " Standard Gas Light Co.	1,117.13	226,331.10	.0094
Repairs of Gas Services		159,168.27	.0066
Repairs of Gas Meters		541,028.56	.0226
Repairs of Gas Distribution Tools		42,709.54	.0018
Repairs of Gas Appliances		252,046.59	.0105
Repairs of Buildings		30,139.75	.0013
Repairs of Street Lamps		1,317.18	.0001
Commercial Expenses		1,671,611.72	.0695
Salaries - General Office (Consol. Gas Co.)	508,642.11		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	28,802.96	537,445.07	.0223
Supplies and Expenses - General Office (Consol. Gas Co.)	301,154.11		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	14,323.69	315,477.80	.0131
General Law Expense (Consol. Gas Co.)	49,679.10		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	13,137.79	62,816.89	.0026
Claims and Arrears Expense		27,632.06	.0011
Claims for Damages (Consol. Gas Co.)	6,364.57		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	18,025.09	24,389.66	.0010
Insurance (Consol. Gas Co.)	156,546.42		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	44,059.82		
" " " " East River Gas Co.	9,467.69		
" " " " Standard Gas Light Co.	413.10	212,806.93	.0088
Vacation and Sickness (Consol. Gas Co.)	143,974.04		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	6,743.20	150,717.24	.0063
Contributions to Employees Aid Society (Consol. Gas Co.)	85,165.62		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	29,772.20	114,938.02	.0048
Superannuation (Consol. Gas Co.)	158,968.18		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	1,052.04	160,020.22	.0067
Stable and Automobile Expense		288,613.11	.0120
Miscellaneous General Expense (Consol. Gas Co.)	176,061.06		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	18,237.56	194,296.62	.0081
Undistributed Adjustments (Consol. Gas Co.)	134,656.60 X		
Less Amount Paid to Astoria Lt. Ht. & Pr. Co.	12,156.96	122,501.64 X	.0051 X
Duplicate Gas Charges (Consol. Gas Co.)	84,121.70 X		
Add Credit from Astoria Lt. Ht. & Pr. Co.	11,245.64 X	95,366.34 X	.0040 X
Uncollectible Bills		110,734.41	.0046
Interest on Consumers' Deposits		94,032.42	.0039
Expense in re Gas Rate Appeal #3		86,458.06	.0036
Expense in re P.S.C. Hearings		113.56	-
Repairs, Insurance etc. re Property rented to Others		547.77	-
Total Cost of Distribution and Other Expenses		6,921,709.	.2877
Retirement Expense (Consol. Gas Co.)	642,019.30		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	44,059.83		
" " " " East River Gas Co.	9,467.00		
" " " " Standard Gas Light Co.	413.10	695,979.83	.0373
Taxes Paid directly by Consol. Gas Co.	1,824,209.33		
Add Taxes Paid by Consol. to Astoria Lt. Ht. & Pr. Co.	550,462.21		
" " " " " " East River Gas Co.	94,875.96		
" " " " " " Standard Gas Light Co.	4,472.92	2,474,040.42	.1028
Interest on Unpaid Taxes		115,042.57	.0048
Total Cost of Production, Distribution, etc. (on basis above indicated, exclusive of any return upon property or investment)		22,505,992.17	.9355
Deduct Miscellaneous Operating Revenue			
Gross Profit from Sales of Gas Appliances	380,133.90		
Rent of Gas Appliances	1,547,152.89		
Interest on Bank Balances	58,638.74		
Rental of Jointly Used Facilities (excluding 6% return on investment)	64,469.57		
Miscellaneous Rent Revenue	76,122.96	2,096,518.06	.0872
Net Cost of Production and Distribution of all Gas Sold by Consolidated Gas Company (exclusive of any return upon property or investment)		$20,407,474.11	$.8483

Note - The foregoing figures relate to the cost of the quality of gas actually supplied during the year 1923, viz., an average of about 593 B.T.U. per cubic foot (Mim. S.M. page 5560). If gas of not less than 650 B.T.U. had been supplied during 1923, the above-stated costs would have been increased at least 4.95¢ per thousand cubic feet of gas made (Mim. S.M. p. 6560) or 5.19¢ per thousand cubic feet of gas sold.

Rate Required for 8% Return on Investment in all property used in the service of Consolidated Gas Company Consumers (Schedule "A")			
Net Cost of all gas sold by Consolidated Gas Company to its Consumers, as above		$20,407,474.11	$.8483
Return on Investment at 8% per annum		7,822,063.74	.3251
Add for Federal Income Tax at 12½%	$1,117,437.68		
Less Federal Income Tax included above in the item of Net Cost	395,905.12	721,532.56	.0300
Total Amount and "flat" rate required to yield 8% return on Investment		$28,951,070.41	$1.2034
Rate Required for 8% Return on Present Replacement Cost of all Property used in the service of Consolidated Gas Co. Consumers (Schedule "B")			
Net Cost of all gas sold by Consolidated Gas Company to its Consumers, as above		$20,407,474.11	$ .8483
Return on Present Replacement Cost at 8% per annum		15,444,609.44	.6420
Add for Federal Income Tax at 12½%	$2,206,372.78		
Less Federal Income Tax included above in the item of Net Cost	395,905.12	1,810,467.66	.0752
Total Amount and "flat" rate required to yield 8% return on Investment		37,662,551.21	$1.5655

X Denotes Red in Copy

SCHEDULE "A"

INVESTMENT AS OF DECEMBER 31, 1923 IN ALL PROPERTY USED IN SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS (EXHIBIT #831)

Property owned by the Consolidated Gas Company and devoted to its own Gas business (Exhibits #831 and #839)	$67,849,810.97
Portion of the property owned by the Astoria Lt. Ht. & Pr. Co. and used by the Consolidated Gas Company (Exhibit #831)	23,892,222.83
Portion of property owned by the East River Gas Company of L.I.C. and The Standard Gas Light Company, used by the Consolidated Gas Company (portion of Tunnels and Connecting Mains) (Exhibits #766 and #831)	3,906,751.29
Portion of Property owned by the Standard Gas Light Company and used by the Consolidated Gas Company (portion of 62nd Street Governor and Meter House and Land) Exhibits #766 and #831	75,443.04
Total (per Exhibit #831)	$95,724,228.13

Return on Investment at 6% per annum

Investment as above -	$95,724,228.13		
Add - Investment in Plant & Land at 14th and 42nd St. Stations withdrawn from service October 31st, 1923 (Exhibit #865)	2,461,882.37		
Investment upon which Return should be computed for 10 Mos. to Oct. 31, 1923	98,186,110.50	for 10 Mos. @ 6% per ann.	$6,545,740.70
Add -	95,724,228.13	" 2 " " 6% " "	1,276,323.04
Total Return on Investment at 8% per annum			$7,822,063.74

Federal Income Tax at 12½% ($7,822,063.74 ÷ 87½ = $8,939,501.42 x 12½%) = $1,117,437.68

Replacement Cost per thousand cubic feet of gas sold during the calendar year 1923 - $98,186,110.50 for 10 Mos. = $81,821,758.75

98,724,228.13 for 2 Mos. = 15,954,038.02

Average Investment for the year 97,775,796.77

($97,775,796.77 ÷ 24,057,694,200 cubic feet) = $ 4.0642

Return on Investment at 8% per annum, per thousand cubic feet of gas sold during the calendar year 1923 ($4.0642 x 8%) = $ .3251

SCHEDULE "B"

REPLACEMENT COST AS OF DECEMBER 31, 1923 OF ALL PROPERTY USED IN THE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS

Replacement Cost, as of June 1, 1923 of Property owned by the Consolidated Gas Company and used in the Gas Business June 1, 1923 (per Exhibits 856, 873, 873x and Schedule "X")	$147,434,251.00	
Less Property of the Consolidated Gas Co. used by Affiliated Cos. (Exhibits 871, 873, 873x and Schedule "X")	3,790,053.17	
Balance - Property owned by Consolidated Gas Co. and used in its Gas Business June 1, 1923 (Exhibits 873, 873x and Schedule "X")	143,644,197.83	
Deduct, Replacement Cost of the Net Excess of withdrawals over additions made to Fixed Capital between June 1, and December 31, 1923 (per Exhibit #887)	6,522,085.53	
Property owned by Consolidated Gas Company and used in its Gas Business December 31, 1923		$137,122,112.30
Add- Replacement Cost as of June 1, 1923 of Property of Affiliated Gas Companies devoted to use of Consolidated Gas Company Consumers, December 31, 1923.		
Portion of the property of the Astoria Lt. Ht. & Pr. Co. used by Consolidated Gas Co. June 1, 1923 (per Exhibits 868, 868x, 873, 873x and Schedule "X")	37,539,809.82	
Portion of the Replacement Cost of Net Additions made between June 1st and December 31, 1923 (per Exhibit #886)	80,066.73	37,619,876.55
(a) Portion of the Property of the East River Gas Co. of L.I.C.12/31/23 (Exhibits 868, 873, 873x and Schedule "X")		
Astoria and Ravenswood Tunnels	8,742,186.64	
48" and 60" Mains on Long Island	839,208.32	9,581,394.96
(a) Portion of the property of the Standard Gas Lt. Co. Dec. 31, 1923 (Exhibits 868, 873, 873x and Schedule "X")		
48" Harlem River Main	266,209.03	
62nd Street Governor and Boiler House and Land	121,413.67	387,622.70
Total Replacement Cost as of June 1, 1923 of all property used in the service of Consolidated Gas Company Consumers December 31, 1923		$184,711,006.51

(a) The Replacement Cost as of June 1, 1923 of that portion of the properties of the East River and Standard Gas Companies devoted to use of Consolidated Gas Company Consumers Dec. 31, 1923 were the same as they were on June 1, 1923. Practically no additions to or withdrawals from these properties were made between June 1 and Dec. 31, 1923.

Return on ReplacementCost at 8% per annum -		
Total as above	$184,711,006.51	
Add Replacement Cost of 14th & 42nd St. Properties which were withdrawn from service Oct.31, 1923 (Exh. #887)	10,015,933.80	
Total (upon which interest should be computed for 10 months)	194,726,940.31 (for 10 Mos.@ 8% per ann.)	12,981,796.02
Add -	184,711,006.51 " 2 " " 8% " "	2,462,813.42
Total Interest on Replacement Cost at 8%		$15,444,609.44
Federal Income Tax at 12½% ($15,444,609.44 ÷ 87½% = $17,650,982.32 x 12½%)		$ 2,206,372.78
Replacement Cost per thousand cubic feet of gas sold during the calendar year 1923 ($194,726,904.31 for 10 Mos. = $162,272,450.30		
184,711,006.51 " 2 " 30,765,167.75		
Total average Replacement Cost 193,037,618.05 ÷ 24,057,694,200 c.f. =		$ 8.0248
Return on Replacement Cost at 8% per annum per thousand cubic feet of gas sold during the calendar year 1923 ($8.0248 x 8%) =		$ .6420

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PLAINTIFF'S EXHIBIT NO. 889.

OST OF THE PRODUCTION AND DISTRIBUTION OF ALL THE
AS SOLD BY THE CONSOLIDATED GAS COMPANY OF NEW YORK

FOR THE

YEAR ENDED DECEMBER 31ST, 1922.

NCLUDING COST OF MATERIALS, LABOR, GENERAL EXPENSES,
INSURANCE, MAINTENANCE, TAXES, ETC. PAID IN COST OF
AS PURCHASED; AND PAYMENTS MADE FOR THE USE OF THE
PROPERTY OWNED BY OTHER GAS COMPANIES AND DEVOTED TO
HE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS.)

OTE - The figures herein relate to the cost of the quality of gas actually supplied during the year 1922. If gas of not less than 650 B.T.U. had been supplied during 1922, the costs stated herein would have been increased at least 2.94 cents per thousand cubic feet of gas made (Min. S.M. p. 5558) or 3.15 cents per thousand cubic feet of gas sold.

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CONSOLIDATED GAS COMPANY OF NEW YORK

QUANTITIES AND COSTS OF MATERIALS AND LABOR - COAL GAS MANUFACTURE

(INCLUDING MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF COAL GAS PURCHASED FROM THE ASTORIA LIGHT HEAT AND POWER COMPANY)

YEAR ENDED DECEMBER 31, 1928

Cost of Production - Coal Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu. Ft. Made
Coking Coal	366,827.07 gr. tons	201.5340 lbs.	$7.8170 per gr. ton	$2,867,485.02	$.7038
Handling				118,415.65	.0290
Total Coking Coal				2,986,900.67	.7328
Residuals					
Coke	366,827.07 chalds.	.0900 chalds	5.4247 per chald.	1,989,944.92	.4881
Coal Tar	4,248,714 gals.	1.0421 gals.	.0486 " gal.	206,290.81	.0506
Ammoniacal Liquor	5,262 lbs.	.0013 lbs.	.0000 " lb.	1,671.93 X	.0005 X
Cyanogen	586,900 "	.1439 "	.1634 "lb.	107,655.66	.0264
Ammonia	152,324 "	.0374 "	.0960 " "	14,619.29	.0036
" Sulphate	5,904,294 "	1.4481 "	.0310 " "	183,155.71	.0449
Carbon	62,730 "	.0154 "	.0100 " "	627.29	.0002
Ammonium Concentrate	17,179 gals.	.0042 gals.	.1200 " gal.	2,061.48	.0005
Total Residuals				2,502,481.81	.6138
Deduct, Residual Expense				254,332.63	.0624
Net Credit from Residuals				2,248,148.58	.5514
Net Cost of Coal Carb'd.				737,752.09	.1809
Bench Fuel - Coke	84,201,391 lbs.	20.6518 lbs.	.3667 per C. lbs.	310,422.47	.0761
Boiler " Coal	154.08 gr. tons	.0047 "	8.1014 " gr. ton	1,248.26	.0003
" " Coke	22,203,066 lbs.	5.4457 "	.3020 " C. lbs.	67,063.67	.0164
" " Water Gas Tar	1,070,371 gals.	.2625 gals.	.0478 " gal.	51,163.76	.0125
Labor Cartage, etc. Handling				1,842.03	.0005
Total Coal Gas Fuel				431,740.39	.1059
Gas Oil	5,220,972 gals.	1.2805 gals.	.0556 per gal.	291,089.08	.0714
Water	18,760,907 cu.ft.	4.6014 cu.ft.	1.00 " M.cu.ft.	18,760.91	.0046
Iron Mass	102,083 bus.	.0250 bus.	.2423 " bus.	24,736.76	.0061
Sundry Supplies				6,853.83	.0017
Labor, Cartage, etc. Handling				-	-
Total Materials				1,510,933.06	.3706
Residuals - Water Gas Tar	1,000,336 gals.	.2454 gals.	.0447 per gal.	44,765.08	.0110
Drip Oil	30,734 "	.0075 "	.0492 " "	1,512.64	.0004
Total Residuals				46,277.72	.0114
Net Materials				1,464,655.34	.3592
Gas Making Labor				344,496.45	.0845
Electric Power House Oper'g.				70,243.88	.0172
Total Materials & Labor				1,879,394.67	.4609
Repairs				387,764.04	.0951
Miscellaneous Works Expense				133,622.31	.0328
Total Cost of Coal Gas				$2,400,781.02	$.5888

Gas Made - Cubic Feet 4,077,191,400

X Denotes Red in Copy

CONSOLIDATED GAS COMPANY OF NEW YORK

QUANTITIES AND COSTS OF MATERIALS AND LABOR - WATER GAS MANUFACTURE

(INCLUDING MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE ASTORIA LIGHT HEAT AND POWER COMPANY, THE NEW AMSTERDAM GAS COMPANY, THE STANDARD GAS LIGHT COMPANY AND THE NEW YORK MUTUAL GAS LIGHT COMPANY

YEAR ENDED DECEMBER 31, 1922

Cost of Production - Water Gas	Quantity		Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	90,671.29	gr. tons	11.2871 lbs.	$10.4171 per gr. ton	$ 944,556.30	$ .0525
Coke	394,287,714	lbs.	21.9118 "	.3836 " C. lbs.	1,512,559.20	.0840
Boiler Fuel - Coal	11,155.82	gr. tons	1.3887 "	10.3485 " gr. tons	115,446.87	.0064
Coke	71,036,913	lbs.	3.9477 "	.3407 " C. lbs.	242,015.00	.0135
Water Gas Tar	9,994,742	gals.	.5554 gals.	.0442 " gal.	441,765.65	.0246
Labor, Cartage, etc. Handling					158,205.65	.0088
Total Water Gas Fuel					3,414,528.67	.1898
Gas Oil	73,809,217	gals.	4.1018 gals.	.0573 per gal.	4,232,944.71	.2352
Water	36,189,537	cu.ft.	2.0112 cu.ft.	1.00 " M. c.f.	36,189.55	.0020
Iron Mass	156,102	bus.	.0087 bus.	.2287 " bu.	35,707.46	.0020
Shavings	61,579	bus.	.0034 "	.0527 " "	3,247.82	.0002
Sundry Supplies					14,914.94	.0008
Labor, Cartage etc. Handling Spent Material					32,723.26	.0018
Total Material					7,770,056.41	.4318
Deduct, Residuals						
Water Gas Tar	14,062,508	gals.	.7809 gals.	.0472 per gal.	663,950.37	.0369
Drip Oil	522,155	"	.0290 "	.0540 " "	28,211.52	.0016
Total Residuals					692,162.09	.0385
Residual Expense					7,991.01	.0005
Net Credit from Residuals					684,171.08	.0380
Net Materials					7,085,885.33	.3938
Gas Making Labor					580,861.88	.0323
Electric Power House Operating					37,486.93	.0021
Total Material and Labor					7,704,236.14	.4282
Repairs					715,018.64	.0398
Miscellaneous Works Expense					180,485.22	.0100
Total Cost of Water Gas					$8,600,740.00	$.4780

Gas Made - Cubic Feet 17,994,341,700

CONSOLIDATED GAS COMPANY OF NEW YORK

COST OF PRODUCTION

COAL AND WATER GAS

YEAR ENDED DECEMBER 31, 1922.

	Cubic Feet	Amount	Cost per M. Cu. Ft.
Total Cost of Coal Gas Made - Brought Forward	4,077,191,400	$2,400,781.02	$ .5888
" " " Water " " " "	17,994,341,700	8,600,740.00	.4780
Total	22,071,533,100	11,001,521.02	.4984
Gas Storage		254,883.56	
Repairs - 14th & 42nd Street		19,258.52	
Total Cost of Production	22,071,533,100	$11,275,662.90	$.5109

GAS ACCOUNT - CUBIC FEET

Gas on Hand - Jan. 1st, 1922	39,904,000	
" Made	22,071,533,100	
Total	22,111,437,100	
Deduct, Gas on Hand Dec. 31, 1922	52,666,000	
Net Total to be Accounted for	22,058,771,100	
Gas Sales to Consumers	20,560,385,600	
" Used by Company	82,136,900	
Unaccounted for due to Condensation, etc.	1,416,346,600	- 6.42%
	22,058,771,100	
Ratio of Sales to Make	93.24%	

CONSOLIDATED GAS COMPANY OF NEW YORK

COST OF PRODUCTION AND DISTRIBUTION

(ALL SUMS PAID AS RETURN UPON INVESTMENT IN PROPERTY OF OTHER COMPANIES USED FOR CONSOLIDATED GAS COMPANY HAS BEEN ELIMINATED FROM THIS STATEMENT OF COST, VIZ., A TOTAL OF $2,594,433.40)

YEAR ENDED DECEMBER 31ST, 1922

		Amount	Cost per M. Cu. Ft. Sold
Cost of Production (Brought Forward - Gas Sales cu.ft. 20,500,265,600)		$11,275,662.90	$ .5479
Cost of Distribution and Other Expenses			
Distribution, Suptce. Supplies and Expenses		516,169.86	.0251
Gas Meter and Installation Work		418,060.78	.0203
Work on Consumers' Premises (Miscel.)		536,361.93	.0258
" " " " Gas Supply and Inspection		96,096.09	.0047
Repairs of Gas Mains (Consol. Gas Co.)	$179,405.23		
Add Amount Paid to East River Gas Co.	83,791.74		
" " " " Standard Gas Light Co.	2,436.97	264,633.94	.0128
Repairs of Gas Services		103,926.23	.0050
" " " Meters		668,601.56	.0325
" " " Distribution Tools		32,907.95	.0016
" " " Appliances		283,557.77	.0138
" " Buildings		19,425.10	.0009
" " Street Lamps		924.76	-
Commercial Expense		1,514,096.42	.0736
Salaries - General Office (Consol. Gas Co.)	445,771.24		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	30,749.99	476,521.23	.0232
Supplies and Expenses - General Office (Consol. Gas Co.	169,269.40		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	13,073.15	182,342.55	.0089
General Law Expense (Consol. Gas Co.)	128,112.62		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	17,459.45	145,572.07	.0071
Claims and Arrears Expense		25,731.20	.0013
Claims for Damages (Consol. Gas Co.)	3,679.78		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	13,406.69	17,086.47	.0008
Insurance (Consol. Gas Co.)	132,830.71		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	139,998.75		
" " " " East River Gas Co.	31,046.90		
" " " " Standard Gas Light Co.	1,214.60		
" " " " N.Y. Mutual Gas Light Co.	4,118.54	309,209.50	.0150
Vacation and Sickness (Consol. Gas Co.)	121,804.53		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	5,649.29	127,453.82	.0062
Contributions to Employees Aid Society (Consol. Gas Co.)	57,988.86		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	19,359.85	77,348.71	.0038
Superannuation (Consol. Gas Co.)	140,215.81		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	671.81	141,087.62	.0069
Stable and Automobile Expense		279,948.09	.0136
Miscellaneous General Expense (Consol. Gas Co.)	183,418.23		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	5,983.10	189,401.33	.0092
Undistributed Adjustments (Consol. Gas Co.)	74,037.62		
Less Amount Paid to Astoria Lt. Ht. & Pr. Co.	8,495.15	65,542.47	.0032
Duplicate Gas Charges (Consol. Gas Co.)	75,580.40		
Add Credit from Astoria Lt. Ht. & Pr. Co.	7,604.50	83,184.90	.0040
Uncollectible Bills		71,039.40	.0035
Interest on Consumers' Deposits		97,823.80	.0048
Expense re Gas Rate Appeal #2		30,855.54	.0015
Expense re P.S.C. Hearings		43,471.55	.0021
Repairs, Insurance, etc. re Property rented to others		1,836.36	.0001
Total Cost of Distribution and Other Expenses		6,522,119.55	.3169
Retirement Expense (Consol. Gas Co.)	720,310.00		
Add Amount Paid to Astoria Lt. Ht. & Pr. Co.	139,998.75		
" " " " East River Gas Co.	31,046.90		
" " " " Standard Gas Light Co.	1,214.61		
" " " " N.Y. Mutual Gas Light Co.	4,118.54	896,688.81	.0436
Taxes Paid directly by Consol. Gas Co.	1,865,624.40		
Add Taxes Paid to Astoria Lt. Ht. & Pr. Co.	579,216.32		
" " " " East River Gas Co.	103,489.68		
" " " " Standard Gas Light Co.	4,337.15		
" " " " N.Y.Mutual Gas Light Co.	20,959.19	2,573,606.81	.1250
Interest on Unpaid Taxes		129,141.00	.0063
Total Cost of Production, Distribution, etc. (on basis above indicated, exclusive of any return upon property or investment)		21,397,221.07	1.0397
Deduct, Miscellaneous Operating Revenue			
Gross Profit from Sales of Gas Appliances	396,714.29		
Rent of Gas Appliances	1,465,979.77		
Interest on Bank Balances	47,180.29		
Rental of Jointly Used Facilities (excluding 8% return on Investment)	107,317.49		
Miscellaneous Rent Revenue	46,912.93	1,964,104.77	.0954
Net Cost of Production and Distribution of All Gas Sold by Consolidated Gas Company (exclusive of any return upon property or investment		$19,433,116.30	$ .9443
Note - The foregoing figures relate to the cost of the quality of gas actually supplied during the year 1922. If gas of not less than 650 B.T.U. had been supplied during 1922, the above-stated costs would have been increased at least 2.94 cents per thousand cubic feet of gas made (Min. Sdl. p. 5556) or 3.15 cents per thousand cubic feet of gas sold.			
Rate Required for 8% Return on Investment in all property used in the service of Consolidated Gas Company Consumers (Schedule "A")			
Net Cost of all gas sold by Consolidated Gas Company to its Consumers, as above		$19,433,116.30	$ .9443
Return on Investment at 8% per annum		6,998,768.75	.3401
Add for Federal Income Tax at 12½%	$999,824.11		
Less Federal Income Tax included above in the item of Net Cost	312,357.90	687,466.21	.0334
Total Amount and "flat" rate required to yield 8% return on investment		$27,119,351.27	$1.3178
Rate Required for 8% Return on Present Replacement Cost of all property used in the service of Consolidated Gas Company Consumers (Schedule "B")			
Net Cost of all gas sold by Consolidated Gas Company to Consumers, as above		$19,433,116.30	$ .9443
Return on Present Replacement Cost at 8% per annum		14,652,653.75	.7120
Add for Federal Income Tax at 12½%	$2,093,236.25		
Less Federal Income Tax included above in the item of Net Cost	312,357.90	1,780,878.35	.0865
Total Amount and "flat" rate required to yield 8% return on Present Value		$36,366,648.40	$1.7628

X Denotes Red in Copy

SCHEDULE "A"

INVESTMENT AS OF DECEMBER 31, 1922 IN ALL PROPERTY USED IN SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS (EXHIBIT 831)

Property owned by the Consolidated Gas Company and devoted to its own Gas Business (Exhibits #828 and #831)			$63,781,796.32
Portion of the Property of The Astoria Light Heat and Power Company used by the Consolidated Gas Company (Exhibit #831)			24,847,874.37
Portion of Property owned by The East River Gas Company of L.I.C. and The Standard Gas Light Company used by the Consolidated Gas Company (portion of Tunnels and Connecting Mains) per Exhibits 765 and831)			4,261,435.71
Portion of Property owned by The Standard Gas Light Company, used by the Consolidated Gas Company (portion of 62nd Street Governor and Boiler House and Land) Exhibits 765 and 831			58,560.40
Total (per Exhibit #831)			$92,949,668.80
Return on Investment at 6% per annum			
Total as above		$92,949,668.80	
Deduct - Property of the N.Y. Mutual Co. which was acquired Aug. 31,1922 and not used in the service of Consol. Gas Co. Consumers prior to August 31, 1922			
T o t a l	$11,010,830.72		
Less devoted to Use of Consol. Gas Co.	1,269,871.46		
" devoted to Use of Standard Gas Lt.Co.	1,543,170.39		
	2,813,041.85	8,197,588.87	
Balance upon which Return should be computed for 8 Mos. to Aug. 31, 1922		$4,752,079.93 for 8 Mos. @ 6% per ann.	$ 4,520,110.93
A d d -		92,949,668.80 " 4 " " 6% " "	2,478,667.83
T o t a l			$ 6,998,778.76
Federal Income Tax at 12½% ($6,998,778.76 ÷ 87½% = $7,998,632.87x 12½%) =			$ 999,824.11
Investment per thousand cubic feet of gas sold during the calendar year 1922 -			
2/3rds of $84,752,079.93 =	$56,501,386.62		
1/3rd of 92,949,668.80 =	30,983,222.93		
Average Investment	87,484,609.55 ÷ 20,580,285,600 cubic feet =		$ 4.2509
Return at 6% per annum, per thousand cubic feet of gas sold during the Calendar year 1922 ($4.2509 x 8%) =			$ .3401

SCHEDULE "B"

REPLACEMENT COST AS OF DECEMBER 31, 1922 OF ALL PROPERTY USED IN THE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS

Replacement Cost as of June 1, 1923 of Property owned by the Consolidated Gas Company and used in the Gas Business June 1, 1923 (per Exhibits 856, 873, 873x and Schedule "X")	$147,434,251.00	
Less - Net Additions made to Fixed Capital during the 5 Mos. to May 31, 1923 at actual cost (per Company's Books)	405,782.76	
Replacement Cost of Property owned and used in the Gas Business December 31, 1922	147,028,468.24	
Deduct - Replacement Cost of Property owned and devoted to use of Consumers of Affiliated Gas Companies (on basis of 1922 Report of Geo. E. Woods (Exh. 765)	6,340,365.88	
Replacement Cost of Property owned and used in the service of Consolidated Gas Company Consumers December 31, 1922		$140,680,102.36
Replacement Cost of property of Affiliated Gas Companies used as of December 31, 1922 in the service of Consumers of Consolidated Gas Company (on basis of 1922 Report of George E. Woods Exh. 765)		
Portion of Property of the Astoria Lt. Ht. & Pr. Co.		40,383,567.84
Portion of Property of the East River Gas Co. of L.I.C.		
Astoria Tunnel	8,566,127.65	
Ravenswood Tunnel	969,842.45	
48" and 60" Mains on Long Island	915,349.31	10,451,319.61
Portion of Property of the Standard Gas Light Company		
48" Harlem River Main	290,362.06	
62nd Street Governor & Boiler House and Land	77,328.18	367,690.24
Total Replacement Cost of All Property used in service of Consolidated Gas Company Consumers, Dec. 31, 1922		$191,882,680.05

Return on Replacement Cost at 8% per annum

Total as above		$191,882,680.05	
Deduct - Replacement Cost of Property of the N.Y. Mutual Gas Lt. Co. which was acquired Aug. 31, 1922 and not used in the service of Consol. Gas Co. Consumers prior to Aug. 31, 1922			
Total Replacement Cost 12/31/22 (Actual Cost - $11,010,630.72 x 159.641663%) =	$17,577,653.99		
Less devoted to use of			
Consolidated Gas Co.	2,027,243.92		
Standard Gas Lt. Co.	2,463,547.76		
	4,490,791.68	13,086,762.31	
Balance upon which Return should be computed		178,795,917.74	
for 8 Mos. to Aug. 31, 1922		178,795,917.74 for 8 Mos." 8% per ann.	$ 9,535,782.28
Add -		191,882,680.05 " 4 " " 8% " "	5,116,871.47
T o t a l			$ 14,652,653.75

Federal Income Tax at 12½% ($14,652,653.75 ÷ 87½ = $16,745,890.00 x 12½%) = $ 2,093,236.25

Replacement Cost per thousand cubic feet of gas sold during the calendar year 1922

2/3rds of $178,796,917.74 =	$119,197,278.49	
1/3rd " 191,882,680.05 =	63,960,893.36	
Average Investment for the year	183,158,171.84 ÷ 20,580,385,600 cubic feet =	$ 8.8997

Return on Replacement Cost, at 8% per annum, per thousand cubic feet of gas sold during the calendar year 1923 ($8.8997 x 8%) = $ .7120

4105 +
1106

PLAINTIFF'S EXHIBIT NO. 890

CONSOLIDATED GAS COMPANY OF NEW YORK

SCHEDULE "X"
- LAND AS APPRAISED BY MR. ROBERT HUNTLEY -

Replacement Cost as of June 1, 1923
Of all Property devoted to the Service of Consumers of the
Consolidated Gas Company of New York

SCHEDULE "Y"
- LAND AS APPRAISED BY MR. F. K. STEVENS -

Replacement Cost as of June 1, 1923
Of all Property devoted to the Service of Consumers of the
Consolidated Gas Company of New York

AS SET FORTH IN EXHIBITS IN EVIDENCE IN THIS CASE

4106A

SCHEDULE "X"

STATEMENT NO. 1 - Replacement Cost as of June 1, 1923, of Property of the Consolidated Gas Company of New York used in the service of its own consumers.

STATEMENT NO. 2 - Replacement Cost as of June 1, 1923 of Property of the Consolidated and Affiliated Gas Companies used in the service of consumers of the Consolidated Gas Company of New York.

- LAND AS APPRAISED BY MR. ROBERT HUNTLEY -

MAPS

TOO

LARGE

FOR

FILMING

SCHEDULE "Y"

STATEMENT NO. 1 - Replacement Cost as of June 1, 1923 of Property of the Consolidated Gas Company of New York used in the service of its own consumers.

STATEMENT NO. 2 - Replacement Cost as of June 1, 1923 of Property of the Consolidated and Affiliated Gas Companies used in the service of Consumers of the Consolidated Gas Company of New York.

- LAND AS APPRAISED BY MR. F. K. STEVENS -

MAPS

TOO

LARGE

FOR

FILMING

STATEMENT #1a

JOINTLY USED PROPERTY OWNED BY THE
CONSOLIDATED GAS COMPANY OF NEW YORK
AND CONNECTING MAIN

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

		Apportionment of Replacement Cost on basis of 1923 report of George E. Woods						
	Total Replacement Cost	Less devoted To use of Con. Gas Co. 56.445902%	Bal. devoted To use of Other Gas Cos. 43.554098%	To Astoria Company 00.046721%	To N. A. & E. R. Cos. 21.769672%	To Central Union Co. 05.440984%	To No. Union Co. 11.510656%	To Standard Co. 04.786065%
Cost on Sub-Contract basis (per C. C. Simpson)	$1,471,190.00	$830,426.47	$640,763.53	$ 687.35	$320,273.24	$ 80,047.21	$169,343.62	$70,412.11
Engineering, Superintendence and General Contractors' Expense	191,255.00	107,955.61	83,299.39	89.36	41,635.59	10,406.15	22,014.70	9,153.59
Administrative, Legal and General Expense	41,561.00	23,459.48	18,101.52	19.42	9,047.69	2,261.33	4,783.94	1,989.14
Organization	97,000.00	54,752.52	42,247.48	45.32	21,116.58	5,277.76	11,165.34	4,642.48
Cost of Financing	102,000.00	57,574.82	44,425.18	47.66	22,206.06	5,549.80	11,740.87	4,881.79
Interest during Construction	151,840.00	85,707.46	66,132.54	70.94	33,055.07	8,261.59	17,477.78	7,267.16
Total -	$2,054,846.00	$1,159,876.36	$894,969.64	$960.05	$447,333.23	$111,803.84	$236,526.25	$98,346.27

3.

4113

STATEMENT #2.

PROPERTY OF THE CONSOLIDATED GAS COMPANY OF NEW YORK USED WHOLLY BY OTHER COMPANIES
- ASSUMED 30" MAIN BASED ON THE RELATIVE CAPACITY OF A 48" MAIN -

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

	Replacement Cost of 48" Transfer Main in the Bronx	Estimated Replacement Cost of an assumed 30" Transfer Main devoted to use of Cent. & North. Un. Gas Cos. on basis of its relative capacity to the 48" transfer main running between the Cent.Un. Plant & the Kingsbridge Holder (viz. 30.88%)	Apportionment of Replacement Cost on basis of 1923 Report of Geo. E. Woods	
			To Central Union Co. 56.764680%	To Northern Union Co. 43.235320%
Replacement cost to Sub-Contractor working for a general Contractor (per C. C. Simpson, 30,105 feet of Main) -	$1,556,568.00	$480,674.38	$272,853.27	$207,821.11
Engineering, Superintendence and General Contractors' Expense and Profit -	202,356.00	62,487.53	35,470.85	27,016.68
Administrative and Legal Expense -	43,974.00	13,579.17	7,708.17	5,871.00
Organization -	100,000.00	30,880.00	17,528.93	13,351.07
Cost of Financing -	105,000.00	32,424.00	18,405.38	14,018.62
Interest during Construction -	160,233.00	49,479.95	28,087.14	21,392.81
T o t a l -	$2,168,131.00	$669,525.03	$380,053.74	$289,471.29

4114

S.

STATEMENT #3

PROPERTY OF THE CONSOLIDATED GAS COMPANY OF N.Y. USED WHOLLY BY OTHER COMPANIES
36" DISTRIBUTING MAINS IN THE BRONX

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1st, 1923

	Total Replacement Cost	Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods	
		To Central Union Co. 56.764689%	To Northern Union Co. 43.235320%
Cost to Sub-contractor working for a General Contractor (per C.C.Simpson 20,406½ feet of Main) -	$658,487.00	$373,788.04	$284,698.96
Engineering, Superintendence and General Contractor's Expense and Profit -	85,603.00	48,592.27	37,010.73
Administrative and Legal Expense -	18,602.00	10,559.37	8,042.63
Organization Expense -	43,500.00	24,692.64	18,807.36
Cost of Financing -	46,000.00	26,111.75	19,888.25
Interest during Construction -	67,975.00	38,585.79	29,389.21
T o t a l -	$920,167.00	$522,329.86	$397,837.14

STATEMENT #4

PROPERTY OF THE CONSOLIDATED GAS COMPANY OF NEW YORK
USED WHOLLY BY THE CENTRAL UNION GAS CO.

SMALL MAINS IN THE BOROUGH OF THE BRONX

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

	Total Replacement Cost Devoted to use of the Central Union Gas Co.
Cost to Sub-contractor working for a General Contractor per C.C.Simpson, 13,254 ft. of different sized mains -	$104,270.00
Engineering, Superintendence and General Contractor's Expense and Profit -	13,555.00
Administrative and Legal Expense -	2,946.00
Organization -	6,900.00
Cost of Financing -	7,250.00
INterest during Construction -	10,766.00
T o t a l -	$145,687.00

STATEMENT #5.

PROPERTY OF THE CONSOLIDATED GAS COMPANY OF N.Y. USED WHOLLY BY OTHER COMPANIES
ASSUMED 5,000 M. CUBIC FOOT HOLDER AND ACCESSORIES AND LAND AT KINGSBRIDGE

REPLACEMENT COST AS OF JUNE 1, 1925 BASED UPON PRICES PREVAILING AS OF JUNE 1ST, 1925.

	Replacement Cost of 10,000 M.cu.ft. Holder & Accessories and land at Kingsbridge	Total Replacement Cost of Assumed 5,000 M. c.f. Holder and Accessories and Land (Est. at ½ of 10,000 M.cu.ft. Kingsbridge Holder, etc.	Apportionment of Replacement Cost on basis of 1925 Report of George E. Woods	
			To Central Union Gas 56.7544607%	To Northern Union Gas 43.2455393%
Land (per testimony of Mr. Robert Huntly p. 4690 of mimeograph record)	$265,000.00	$132,500.00	$75,213.20	$57,286.80
Holder and Accessories (per Mr.A.S. Miller's Exhibit #856)	1,125,122.00	562,561.00	319,335.95	243,225.05
Buildings (per Mr.H.R.Burt's Exhibits #838 and 838a)	219,061.00	109,030.50	61,890.82	47,139.68
Omissions and Contingencies	56,256.00	28,128.00	15,966.77	12,161.23
Engineering, Superintendence and General Contractors' Expense and Profit	181,927.00	90,963.50	51,635.14	39,328.36
Administrative, Legal and General Expense	39,534.00	19,767.00	11,220.67	8,546.33
Organization	110,000.00	55,000.00	31,220.87	23,779.13
Cost of Financing	116,000.00	58,000.00	32,923.52	25,076.48
Interest during Construction	189,672.00	94,836.00	53,833.36	41,002.64
Taxes	17,887.00	8,918.50	5,062.54	3,855.96
T o t a l	$2,319,409.00	$1,159,704.50	$658,308.86	$501,401.86

4117

W.

STATEMENT NO-5A

PROPERTY OF THE CONSOLIDATED GAS COMPANY OF NEW YORK USED WHOLLY BY OTHER COMPANIES
ASSUMED 5,000 M. CUBIC FOOT HOLDER AND ACCESSORIES AND LAND AT KINGSBRIDGE

REPLACEMENT COST AS OF JUNE 1, 1925 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1925

	Replacement Cost of 10,000 M.cu.ft. Holder & Accessories and land at Kingsbridge	Total Replacement Cost of Assumed 5,000 M. c.f. Holder And Accessories and Land (Est. at ½ of 10,000 M.cu.ft. Holder etc. at Kingsbridge	Apportionment of Replacement Cost on basis of 1923 Report of Geo. E. Woods	
			To Central Union Gas 56.764380%	To Northern Union Co. 43.235620%
Land as appraised by F. K. Stevens.				
Land (per testimony of F. K. Stevens, p. 2646 Nimmo.S.M.) Block 3236, Lot 1	$250,000.00	$125,000.00	$70,955.85	$54,044.15
Holder & Accessories (per A.S.Miller's Exhibit #856)	1,125,122.00	562,561.00	319,335.98	243,225.05
Buildings (per H.R.Burt's Exhibit #838 and 838A)	218,061.00	109,030.00	61,890.53	47,139.47
Omissions and Contingencies	56,256.00	28,128.00	15,966.77	12,161.23
Engineering, Superintendence and General Contractors' Expense and Profit	181,927.00	90,964.00	51,635.42	39,328.58
Administrative, Legal and General Expense	39,534.00	19,767.00	11,220.67	8,546.33
Organization	109,000.00	54,500.00	30,936.75	23,563.25
Cost of Financing	115,000.00	57,500.00	32,639.69	24,860.31
Interest during Construction	187,112.00	93,556.00	53,106.77	40,449.23
Taxes	17,837.02	8,918.02	5,062.31	3,855.71
T o t a l	$2,299,849.02	$1,150,924.02	$ 652,750.68	$ 497,173.32

STATEMENT No. 6

PROPERTY OWNED BY THE ASTORIA LIGHT AND POWER COMPANY AND USED IN THE GAS BUSINESS
MANUFACTURING PLANTS AND EQUIPMENT, HOLDERS, LAND AND WORKING CAPITAL

REPLACEMENT COST AS OF JUNE 1, 1923, BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923 (EXCLUSIVE OF GOING VALUE)
EXCLUDING $1,622,211.33 OF THE REPLACEMENT COST OF PROPERTY AT LUYSTER CREEK DEVOTED TO THE SERVICE OF THE NEW YORK EDISON CO.

Land as Appraised by Robert Huntley	Total Replacement Cost (Excl. portion of Luyster Creek Devoted to use Of N.Y. Edison)	Astoria Property Devoted Exclusively To use of Its own Consumers	Balance Property Used Jointly with its Affiliated Gas Cos.	Apportionment of Replacement Cost on basis of 1923 Report of George B. Woods			
				Devoted To use of Con. Gas Co. 80.074419%	Devoted To use of No. Union 13.069767%	Devoted To use of Standard Co. 6.789536%	Devoted To own use 00.066279%
Land (as appraised by Robert Huntley)	$ 5,044,046.00		5,044,046.00	4,038,990.53	659,245.06	342,467.27	3,343.14
Buildings (as appraised by H.R. Burt)	5,860,332.00		5,860,332.00	4,692,626.80	765,931.74	397,889.29	3,884.17
Mfg. Plants Holders, etc. (as appraised by A. S. Miller)	18,628,663.67		18,628,663.67	14,916,794.20	2,434,722.94	1,264,799.64	12,346.89
Special Reinforced Bulkhead (as appraised by C. Trout)	176,201.67		176,201.67	141,092.46	23,029.15	11,963.27	116.79
Street Mains (as appraised by C. C. Simpson)	6,713.00	$6,713.00					
Services (as appraised by C.C. Simpson)	232.00	232.00					
Meters (per Books)	117.00	117.00					
Tools & Implements (per Books)	143,607.00		143,607.00	114,992.47	18,769.10	9,750.25	95.18
Gas Appliances (per Books)	10.00	10.00					
Gen'l Equipment (per Books)	54,804.00		54,804.00	43,883.99	7,162.75	3,720.94	36.32
Furniture & Fixtures (per Books)	51,551.00		51,551.00	41,279.17	6,737.69	3,500.07	34.17
Omissions & Contingencies (per Books)	931,432.34		931,432.34	745,839.03	121,736.04	63,239.93	617.34
Organization	2,227,333.33	465.00	2,226,868.33	1,783,151.88	291,046.50	151,194.01	1,475.94
Cost of Financing	2,341,833.33	489.00	2,341,344.33	1,874,817.87	306,008.25	158,966.39	1,551.82
Engineering, Etc.	3,328,434.33	873.00	3,327,561.33	2,664,525.40	434,904.51	225,925.94	2,205.48
Interest during Construction	3,535,826.34	696.00	3,535,130.34	2,830,735.08	462,033.30	240,018.91	2,343.05
Taxes during Construction	436,505.33	-	436,505.33	349,529.11	57,050.23	29,636.68	289.31
Administration, etc.	723,294.33	190.00	723,104.33	579,021.59	94,508.05	49,096.42	479.27
Working Capital	3,400,000.00	-	3,400,000.00	2,722,530.24	444,272.08	230,844.19	2,253.49
Total -	$46,890,936.67	$9,786.00	$46,881,151.67	$37,539,909.82	$6,127,257.29	$3,183,012.20	$31,072.36

STATEMENT NO. 6-A

PROPERTY OWNED BY THE ASTORIA LIGHT HEAT AND POWER COMPANY AND USED IN THE GAS BUSINESS
MANUFACTURING PLANTS AND EQUIPMENT, HOLDERS, LAND AND WORKING CAPITAL

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923, EXCLUDING $1,575,225.33 OF THE REPLACEMENT COST OF PROPERTY AT LYSTER CREEK DEVOTED TO THE SERVICE OF THE NEW YORK EDISON COMPANY

Land as Appraised by F. K. Stevens	T o t a l Replacement Cost (Excl. portion of Lyster Creek Devoted to use of N. Y. Edison)	Astoria Property Devoted Exclusively to use of its own Consumers	Balance (Property U s e d Jointly With its Affiliated Gas Cos.)	Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods: Devoted To use of Con. Gas Co. 80.074419%	Devoted To use of No.Union Co. 13.069767%	Devoted To use of Standard Co. 6.789836%	Devoted To own use 00.066279%
Land (as appraised by F. K. Stevens)	$4,195,926.67		$ 4,195,926.67	$ 3,359,863.90	$ 548,397.84	$ 284,883.91	$2,781.02
Buildings (as appraised by H. R. Burt)	5,860,332.00		5,860,332.00	4,692,626.80	765,931.74	397,889.29	3,884.17
Mfg. Plants, Holders, etc. (as appraised by A. S. Miller)	18,628,663.67		18,628,663.67	14,916,794.20	2,434,722.94	1,264,799.64	12,346.89
Special Reinforced Bulkhead (as appraised by C. Trout)	176,201.67		176,201.67	141,092.46	23,029.15	11,963.27	116.79
Street Mains (as appraised by C.C.Simpson)	6,713.00	$6,713.00					
Services (as appraised by C.C.Simpson)	232.00	232.00					
Meters (per Books)	117.00	117.00					
Tools & Implements (per Books)	143,607.00		143,607.00	114,992.47	18,769.10	9,750.25	95.18
Gas Appliances " "	10.00	10.00					
Genl. Equipment " "	54,804.00		54,804.00	43,883.99	7,162.75	3,720.94	36.32
Furniture & Fixtures " "	51,551.00		51,551.00	41,279.17	6,737.89	3,500.07	34.17
Omission and Contingencies	931,432.34		931,432.34	745,839.03	121,736.04	63,239.93	617.34
Organization	2,169,333.33	466.00	2,168,868.33	1,736,708.72	283,466.04	147,256.07	1,437.50
Cost of Financing	2,283,833.33	489.00	2,283,344.33	1,828,374.71	298,427.78	155,028.46	1,513.38
Engineering, etc.	3,328,434.33	873.00	3,327,561.33	2,664,525.40	434,904.52	225,925.94	2,205.47
Interest during Construction	3,390,867.67	696.00	3,390,181.67	2,714,644.25	443,084.92	230,175.54	2,246.96
Taxes during Construction	436,505.33		436,505.33	349,529.11	57,050.23	29,636.68	289.31
Administration, etc.	723,294.33	190.00	723,104.33	579,021.89	94,508.06	49,095.42	479.27
Working Capital	3,400,000.00		3,400,000.00	2,722,530.24	444,372.09	230,844.19	2,253.49
Total	$45,781,838.67	$9,785.00	$45,772,383.67	$36,651,706.04	$5,982,300.77	3,107,709.60	$30,337.26

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STATEMENT #7

JOINTLY USED PROPERTY OWNED BY
THE EAST RIVER GAS COMPANY OF LONG ISLAND CITY
ASTORIA TUNNEL

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods

	Total Replacement Cost	To Con. Gas Co. 56.4459024%	To Astoria Co. 00.0467214%	To Gen. Un. Co. 05.4409844%	To No. Un. Co. 11.5106564%	To Standard Co. 04.7860654%	To own use Incl.N.A. Co.21.7696724%
Land (per Robert Huntly's testimony pp. 6346-8 mimeograph record)	$11,480.00	$6,479.99	$ 5.36	$ 624.63	$1,321.42	$ 549.44	$2,499.16
Head Houses (per H.R. Burt's Exh. #841)	131,819.00	74,406.42	61.59	7,172.25	15,173.23	6,308.94	28,696.57
Tunnel (per J. V. Davies Exh. #836)	8,750,676.00	4,939,398.00	4,088.41	476,122.88	1,007,260.21	418,813.04	1,904,993.46
Mains (per C. C. Simpson's Exh. #855)	1,121,741.00	633,176.83	524.09	61,033.75	129,119.75	53,687.25	244,199.33
Engineering, Superintendence & Gen'l Contractors' Expense and Profit	250,470.00	141,380.08	117.02	13,628.03	28,830.74	11,987.66	54,526.50
Administrative, Legal and General Expense	256,368.00	144,709.23	119.78	13,948.94	29,509.64	12,269.94	55,810.47
Organization	660,000.00	372,542.95	308.36	35,910.49	75,970.33	31,588.03	143,679.84
Cost of Financing	695,000.00	392,299.02	324.71	37,814.84	79,999.06	33,263.15	151,299.22
Interest during Construction	1,896,646.00	1,070,578.94	886.13	103,196.21	218,316.40	90,774.71	412,893.61
Taxes during Construction	138,268.00	78,046.62	64.60	7,523.14	15,915.55	6,617.60	30,100.49
Total	$13,912,468.00	$7,853,818.05	$6,500.05	$756,975.16	$1,601,416.33	$665,859.76	$3,028,698.65

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STATEMENT #7A.

JOINTLY USED PROPERTY OWNED BY
THE EAST RIVER GAS COMPANY OF LONG ISLAND CITY
ASTORIA TUNNEL

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1ST, 1923.

Land as appraised by F.E. Stevens	Total Replacement Cost	Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods: To Con. Gas Co. 56.445902%	To Astoria Co. 00.046721%	To Cen. Un. Co. 05.440984%	To No.Un. Co. 11.510660%	To Standard Co. 04.786961%	To Own use incl. N.A.Gas 21.767767%
Land (per F.E. Stevens' testimony p. 6291 and 6292 Mimeograph M.)	7,900.00	$ 4,459.23	$ 3.69	$ 429.84	$ 909.24	$ 378.10	$ 1,719.80
Head Houses (H.R. Burt's Exh. #841)	131,819.00	74,406.42	61.59	7,172.25	15,173.23	6,308.94	28,696.57
Tunnel (J.V. Davies Exh. #836)	8,750,676.00	4,939,298.00	4,088.41	476,122.88	1,007,260.21	418,813.94	1,904,993.46
Mains (C.C. Simpson Exh. #865)	1,121,741.00	633,176.83	524.09	61,023.75	129,119.75	53,687.21	244,199.32
Engineering, Superintendence and General Contractors' Expense and Profit	250,470.00	141,380.05	117.02	13,628.03	28,830.74	11,987.66	54,526.50
Administrative, Legal & General Expense	256,368.00	144,709.23	119.78	13,946.94	29,509.64	12,269.34	55,813.47
Organization	660,000.00	372,542.95	308.26	35,910.49	75,973.32	31,586.92	143,678.04
Cost of Financing	695,000.00	392,299.02	324.71	37,814.84	79,999.06	33,262.18	151,299.22
Interest during Construction	1,895,500.00	1,069,932.07	885.60	103,132.86	218,174.49	90,719.86	412,644.12
Taxes during Construction	138,268.00	78,046.42	64.60	7,522.14	15,916.58	6,617.69	30,100.49
Total -	$13,907,742.00	$7,850,350.42	$6,497.85	$754,718.01	$1,600,872.24	$665,422.87	$3,027,469.81

STATEMENT #8.

JOINTLY USED PROPERTY OWNED BY
THE EAST RIVER GAS COMPANY OF LONG ISLAND CITY
RAVENSWOOD TUNNEL

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods.

	Total Replacement Cost	To Con. Gas Co. 56.445902%	To Astoria Co. 00.046721%	To Cent. Un.Co. 06.440984%	To No. Un. Co. 11.510656%	To Standard Co. 04.786065%	To own use Incl.N.A.Co. 21.769672%
Land (per Robert Huntly's testimony pp. 6346-8 mimeograph record)	$ 69,350.00	$ 39,145.23	$ 32.40	$ 3,773.32	$ 7,982.64	$ 3,319.14	$ 15,097.27
Head Houses (per H.R. Burt's Exh.#841)	60,660.00	34,240.08	28.34	3,300.50	6,982.37	2,903.23	13,205.48
Tunnel (per J.V. Davies Exh. #837)	893,444.00	504,312.53	417.43	48,612.14	102,841.27	42,760.81	194,499.82
Mains (per C.C. Simpson Exh. #855)	195,145.00	110,151.36	91.17	10,617.81	22,462.47	9,339.76	42,482.43
Engineering, Superintendence and General Contractors' Expense and Profit	42,189.00	23,813.96	19.71	2,295.50	4,856.23	2,019.19	9,184.41
Administrative, Legal and General Exp.	29,786.00	16,812.98	13.92	1,620.65	3,428.56	1,425.58	6,484.31
Organization	75,000.00	42,334.43	35.04	4,080.74	8,632.99	3,589.55	16,327.25
Cost of Financing	78,000.00	44,027.80	36.44	4,243.97	8,978.31	3,733.13	16,980.35
Interest during Construction	120,794.00	68,183.26	56.44	6,572.38	13,904.18	5,781.28	26,296.46
Taxes during Construction	10,890.00	6,146.96	5.09	592.52	1,253.51	521.20	2,370.72
Total -	$1,575,258.00	$889,168.59	$736.98	$85,709.53	$181,322.53	$75,392.87	$342,928.50

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STATEMENT NO-83

JOINTLY USED PROPERTY OWNED BY
THE EAST RIVER GAS COMPANY OF LONG ISLAND CITY
- RAVENSWOOD TUNNEL -

REPLACEMENT COST AS OF JUNE 1, 1925 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1926

Apportionment of Replacement Cost on Basis of 1925 Report of George E. Woods

Land as appraised by F.K.Stevens	Total Replacement Cost	To Cons. Gas Co. 54.446803%	To Astoria Co. 09.046731%	To Cent.U.Co. 03.440966%	To North.U.Co. 11.510666%	To Standard Co. 04.784246%	To own use incl. N.I. Co. 21.769472%
Land (Per F.K.Stevens' testimony pp. 6290 & 6293 Misc.S.M.)	$56,500.00	$31,891.93	$26.40	$3,074.16	$6,503.82	$2,706.18	$12,299.86
Head Houses (H.R.Burt's Exh.#841)	60,660.00	36,240.08	28.34	3,300.50	6,982.37	2,903.23	13,205.48
Tunnel (J. V.Davies Exh.#837)	893,444.00	504,312.85	417.43	48,612.14	102,841.27	42,760.81	194,499.82
Mains (C.C.Simpson's Exh.#855)	195,145.00	110,151.36	91.17	10,617.81	22,462.47	9,339.76	42,482.43
Engineering, Suptce. & General Contractors' Expense & Profit	42,189.00	23,815.96	19.71	2,296.50	4,856.23	2,019.19	9,184.41
Administrative, Legal & General Expense	29,786.00	16,812.98	13.92	1,620.65	3,428.56	1,425.58	6,484.31
Organization	74,000.00	41,769.97	34.57	4,026.33	8,517.88	3,541.69	16,109.56
Cost of Financing	77,900.00	43,971.35	36.40	4,238.53	8,966.80	3,728.38	16,958.57
Interest during Construction	116,578.00	65,832.42	55.40	6,451.81	13,649.11	5,675.22	25,814.04
Taxes during Construction	10,890.00	6,146.94	5.09	592.82	1,253.51	521.20	2,370.72
Total	$1,569,092.00	$880,043.54	$728.43	$84,829.98	$179,451.72	$74,619.16	$339,409.20

STATEMENT #2

JOINTLY USED PROPERTY OWNED BY
THE EAST RIVER GAS COMPANY OF LONG ISLAND CITY
48" & 60" MAINS IN LONG ISLAND CITY AND ASTORIA

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923.

Apportionment of Replacement cost on basis of 1923 Report of George H. Woods

	Total Replacement Cost	To Con.Gas Co. 56.445902%	To Ast. Co. 00.046721%	To C. U. Co. 05.440994%	To No. U. Co. 11.510656%	To Standard Co. 04.786965%	To own use Incl. N.A. Co. 21.769672%
Cost to Sub-Contractor working for a Gen'l Contractor - per C.C. Simpson (4,473 ft. of 48" & 14,965 ft. of 60" Main)	$1,064,464.00	$600,846.31	$ 497.33	$57,917.31	$122,526.79	$50,945.94	$231,730.32
Engineering, Superintendence and General Contractors' Expense & Profit	138,380.00	78,109.84	64.65	7,529.23	15,928.45	6,622.96	30,124.87
Administrative and Legal Expense	30,071.00	16,973.85	14.05	1,636.16	3,461.37	1,439.21	6,546.36
Organization	70,000.00	39,512.13	32.70	3,808.69	8,057.46	3,350.25	15,238.77
Cost of Financing	74,000.00	41,769.97	34.57	4,026.33	8,517.88	3,541.69	16,109.56
Interest during Construction	109,833.00	61,996.22	51.32	5,976.00	12,642.50	5,256.68	23,910.28
T o t a l -	$1,486,748.00	$839,208.32	$694.62	$80,893.72	$171,134.45	$71,156.73	$323,660.16

STATEMENT #10

JOINTLY USED PROPERTY OWNED BY THE
STANDARD GAS LIGHT COMPANY OF THE CITY OF NEW YORK
48" HARLEM RIVER MAIN

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods

	Total Replacement Cost	To Con. Gas Co. 56.445902%	To Ast. Co. 00.045721%	To N.A. & E.H. Companies 21.769672%	To Con. Un. Co. 05.440984%	To Nor.Un.Co. 11.510656%	To own Use 04.786065%
Cost to Sub-Contractor working for a General Contractor per C.C. Simpson (792 feet of main)	$337,832.00	$190,692.32	$157.84	$ 73,544.92	$18,381.38	$38,886.68	$16,168.86
Engineering, Superintendence and General Contractors' Expense and Profit	43,918.00	24,789.91	20.52	9,560.80	2,389.57	5,055.25	2,101.95
Administrative and Legal Expense	9,544.00	5,387.20	4.46	2,077.70	519.29	1,098.57	456.78
Organization	22,000.00	12,418.10	10.28	4,789.33	1,197.02	2,532.34	1,052.93
Cost of Financing	23,500.00	13,264.78	10.98	5,115.87	1,278.63	2,705.01	1,124.75
Interest during Construction	34,824.00	19,656.72	16.27	7,581.07	1,894.77	4,008.47	1,666.70
Total	$471,618.00	$266,209.03	$220.35	$102,669.69	$25,660.66	$54,286.32	$22,571.95

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STATEMENT #11.

JOINTLY USED PROPERTY OWNED BY THE
STANDARD GAS LIGHT COMPANY OF THE CITY OF NEW YORK
62ND STREET GOVERNOR AND BOILER HOUSE AND ACCESSORIES AND LAND

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

		Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods	
Land as appraised by Robert Huntley	Total Replacement Cost	To Consolidated Gas Company 1/3rd	To own use 2/3rds
Land (per testimony of Robert Huntley, Block 1478, Lot 1, p. 4692, of mimeograph record)	$ 52,000.00	$ 17,333.33	$ 34,666.67
Apparatus (per A.S. Miller's Exhibit #868)	129,519.00	43,173.00	86,346.00
Buildings (per H.R. Burt's Exhibit #840)	75,169.00	25,056.33	50,112.67
Omissions and Contingencies	6,476.00	2,158.67	4,317.33
Engineering, Superintendence and General Contractors' Expense and Profit	27,451.00	9,150.34	18,300.66
Administration, Legal and General Expense	5,965.00	1,988.33	3,976.67
Organization	17,000.00	5,666.67	11,333.33
Cost of Financing	18,000.00	6,000.00	12,000.00
Interest during Construction	30,606.00	10,202.00	20,404.00
Taxes during Construction	2,055.00	685.00	1,370.00
T o t a l -	$364,241.00	$121,413.67	$242,827.33

STATEMENT #11A

JOINTLY USED PROPERTY OWNED BY
THE STANDARD GAS LIGHT COMPANY OF THE CITY OF NEW YORK
62ND STREET GOVERNOR AND BOILER HOUSE AND ACCESSORIES AND LAND

REPLACEMENT COST AS OF JUNE 1, 1923 BASED UPON PRICES PREVAILING AS OF JUNE 1, 1923

Land as appraised by F. K. Stevens	Total Replacement Cost	Apportionment of Replacement Cost on basis of 1923 Report of George E. Woods. To Consolidated Gas Company 1/3rd	To own use 2/3rds
Land (per testimony of F. K. Stevens, Block 1475, Lot 1, p. 2649, mimeograph S.M.)	$ 52,000.00	$17,333.33	$34,666.67
Apparatus (per A. S. Miller's Exhibit #869)	129,519.00	43,173.00	86,346.00
Buildings (per H.R. Surt's Exhibit #840)	75,169.00	25,056.33	50,112.67
Omissions and Contingencies	6,476.00	2,158.67	4,317.33
Engineering, Superintendence and General Contractors' Expense and Profit	27,451.00	9,150.34	18,300.66
Administration, Legal and General Expense	5,965.00	1,988.33	3,976.67
Organization	17,000.00	5,666.67	11,333.33
Cost of Financing	18,000.00	6,000.00	12,000.00
Interest during Construction	30,606.00	10,202.00	20,404.00
Taxes during Construction	2,055.00	685.00	1,370.00
Total	$ 364,241.00	$ 121,413.67	$ 242,827.33

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PLAINTIFF'S EXHIBIT NO. 891

SYSTEM GAS COMPANIES

COST OF PRODUCTION AND DISTRIBUTION OF GAS

FOR THE

CALENDAR YEAR 1923.

NOTE - The figures herein relate to the cost of the quality of gas actually supplied during the year 1923.

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1925.

QUANTITIES OF MATERIALS AND LABOR - COAL GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

Cost of Production - Coal Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Prices	Amount	Cost per Cu. Ft. Made
Caking Coal	553,877.15 gr. tons	197.0902 lbs.	$7.4692 per gr. ton	$4,134,758.44	$ .6572
Handling				157,547.97	.0250
Total Caking Coal				4,292,306.41	.6822
Residuals					
Coke	560,705.69 chalds.	.0875 chalds.	5.5470 per chald.	3,054,766.45	.4855
Coal Tar	6,592,640 gals.	1.0478 gals.	.0471 " gal.	310,628.28	.0494
Ammoniacal Liquor	178,304 lbs.	.0283 lbs.	.0096 " lb.	1,750.50	.0003
Cyanogen	713,894 "	.1136 "	.1866 " "	134,563.04	.0214
Ammonia	182,676 "	.0290 "	.0978 " "	17,806.85	.0028
Ammonia Sulphate	7,719,196 "	1.2269 "	.0349 " "	269,524.40	.0428
Carbon	107,300 "	.0171 "	.0100 " "	1,073.00	.0002
Ammonium Concentrate	143,356 gals.	.0228 gals.	.1200 " gal.	17,202.72	.0027
Total Credit from Residuals				3,807,539.24	.6051
Less Residual Expense -					
Coke				131,377.55	.0209
Other Residuals				223,605.89	.0355
Total Deductions				354,983.44	.0564
Net Credit from Residuals				3,452,555.80	.5487
Net Cost of Coal Carb'd.				839,750.61	.1335
Bench Fuel - Coke	130,597,745 lbs.	20.7575 lbs.	.3767 per C. lbs.	491,925.18	.0782
Boiler " Coal	978.82 gr. tons	.3464 "	8.7411 " gr.ton	8,553.38	.0014
" " Coke	30,469,936 lbs.	4.8430 "	.3065 " C. lbs.	93,391.48	.0148
" " Oil Tar	1,791,496 gals.	.2847 gals.	.0478 " gal.	85,638.49	.0136
Handling - Boiler Fuel				6,147.57	.0010
Total Coal Gas Fuel				685,649.10	.1090
Total Coal Carbonized and Boiler Fuel					
Gas Oil	820,139 gals.	.1304 gals.	.0883 " gal.	1,825,399.71	.2425
Iron Mass	149,111 bus.	.0237 bus.	.2429 " bu.	46,315.37	.0072
Water	27,126,860 cu.ft.	4.3116 cu.ft.	1.00 " M.c.f.	36,214.91	.0057
Sundries Supplies				27,126.86	.0043
Cartage - Spent Material				11,210.99	.0018
				9,255.03	.0015
Total Materials				1,955,522.87	.2828
Residuals - Tar	147,349 gals.	.0234 gals.	.0468 " gal.	6,892.39	.0011
Drip Oil	4,833 "	.0008 "	.0563 " "	272.16	.0000
Total Residuals				7,164.55	.0011
Net Materials				1,646,358.32	.2617
Gas Making Labor				534,259.46	.0849
Electric Power House Operating				98,177.31	.0181
Total Materials & Labor				2,278,795.09	.3617
Repairs - Labor				373,097.45	.0593
Material				382,917.84	.0609
Miscel. Works Expense				163,484.43	.0260
Total (Excl. Gas Storage)				$3,196,294.81	$.5079

Gas Made - cubic feet 6,291,401,000

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1925.

QUANTITIES OF MATERIALS AND LABOR - WATER GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

Cost of Production - Water Gas	Quantity		Quantity Per M. Cu. Ft. Made		Unit Prices		Amount	Cost Per M.Cu. Ft. Made
Coal in Generators	198,608.69	gr. tons	13.4969	lbs.	$10.5208	per gr. ton	$2,089,529.90	$ .0634
Coke " "	561,264,922	lbs.	20.0614	"	.3974	" C. lbs.	2,527,772.39	.0797
Coal under Boilers	33,189.74	gr. tons	2.2565	"	10.4606	" gr. ton	347,192.06	.0108
Coke " "	125,657,656	lbs.	5.8177	"	.3141	" C. lbs.	395,229.78	.0120
Water Gas Tar under Boilers	16,154,986	gals.	.4901	gals.	.0478	" gal.	772,486.13	.0234
Handling - Generator Fuel							246,894.18	.0075
Handling - Boiler Fuel							48,317.84	.0015
Total Water Gas Fuel							6,527,421.28	.1980
Gas Oil	122,096,282	gals.	3.7042	gals.	.0553	per gal.	6,747,957.25	.2047
Iron Mass	293,832	bus.	.0089	bus.	.3472	" bu.	72,639.65	.0022
Water	66,702,113	cu.ft.	2.0236	cu.ft.	1.00	" M.c.f.	66,702.11	.0020
Sundry Supplies							35,327.27	.0011
Cartage - Spent Material							86,381.65	.0026
Total Materials							13,536,409.01	.4106
Residuals - Water Gas Tar	22,218,998	gals.	.6741	gals.	.0476	per gal.	1,057,172.68	.0321
Drip Oil	940,309	"	.0285	"	.0603	" "	56,662.71	.0017
Total Residuals							1,113,835.39	.0338
Deduct Residual Expense							12,798.55	.0006
Net Credit from Residuals							1,101,036.84	.0334
Net Materials							12,435,372.17	.3772
Gas Making Labor							977,789.53	.0297
Electric Power House Operating							60,347.58	.0018
Total Materials and Labor							13,473,489.28	.4087
Repairs - Labor							710,610.88	.0216
Material							532,094.25	.0162
Miscellaneous Works Expense							442,461.69	.0134
Total (Excluding Gas Storage)							$15,158,656.37	$.4599

Gas Made (cubic feet) 32,962,012,000

B.

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1923.

COMBINED COAL AND WATER GAS MANUFACTURE

(EXCLUDING ALL INTER COMPANY CHARGES)

	Cubic Feet	Amount	Cost per M. Cu. Ft.
Coal Gas Made (Excl. Gas Storage) Brought Forward	6,291,601,000	$3,190,294.81	$ .5079
Water " " " " " " "	32,962,012,000	15,158,655.87	.4599
Total Station Cost (excl. Gas Storage)	39,253,613,000	18,353,950.68	.4676
Gas Storage at Works and Distributing Stations		396,840.81	.0101
Total Cost of Production Coal and Water Gas	39,253,613,000	18,749,791.49	.4777
Less, Gas Transferred by Northern Union Gas Co. to the Westchester Lighting Co. and the Bronx Gas and Electric Company	6,412,400	3,046.60	.4751
Net Cost of Production Coal & Water Gas	39,247,200,600	18,746,744.89	.4777

GAS ACCOUNT - CUBIC FEET

Gas on Hand - January 1st, 1923	106,876,000	
Gas Made - Coal Gas	6,291,601,000	
Water Gas	32,962,012,000	
Total	39,360,187,000	
Less, Gas on Hand - December 31, 1923	102,645,000	
Total Send Out	39,257,542,000	
Less, Gas Transferred by Northern Union Gas Co.		
To Westchester Lighting Co.	2,574,000	
Bronx Gas & Electric Co.	3,838,400	
Total Transferred to Other Cos.	6,412,400	
Net Total to be accounted for	39,251,129,600	
Sold to Consumers	37,324,773,700	
Used by the Companies	107,008,000	
Unaccounted for due to condensation etc.	1,819,347,900	- 4.64%
Total	39,251,129,600	
Ratio of Sales to Make	96.10%	

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SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1923.

COMBINED COAL AND WATER GAS
(EXCLUDING ALL INTER COMPANY CHARGES)

		Amount	Per M. Cu. Ft. Sold
Cost of Production - Brought Forward (Gas Sales cu.ft. 37,334,773,700)		$18,746,944.89	$ .5022
Distribution and Other Expenses			
Distribution, Superintendence, Supplies and Expenses		988,622.90	.0265
Meter and Installation Work		913,406.86	.0245
Work on Consumers' Premises		974,521.41	.0261
Gas Supply Inspection		197,341.83	.0053
Repairs on - Street Mains and Tunnels		366,191.93	.0098
Services		266,588.91	.0071
Meters		819,286.90	.0220
Buildings		57,662.75	.0015
Tools		60,554.78	.0016
Gas Appliances		362,722.75	.0097
Public Street Lighting		1,317.18	-
Commercial Expenses		2,743,271.72	.0735
Salaries of General Office		694,566.31	.0186
Supplies and Expenses of General Office		355,681.13	.0095
Legal Expense		115,956.93	.0031
Claims and Arrears Expense		43,469.89	.0012
Insurance		352,051.46	.0094
Vacation and Sickness		223,699.15	.0060
Contributions to Employees Aid Society		168,215.84	.0045
Superannuation		183,000.38	.0049
Stable Expense		66,224.15	.0018
Claims for Damages		43,642.25	.0012
Undistributed Adjustments		144,899.61X	.0039X
Duplicate Gas Charges		120,272.68X	.0032X
Uncollectible Bills		185,072.11	.0050
Interest on Consumers' Deposits		139,697.10	.0038
Rate Case Appeal		137,423.72	.0037
Automobile Expense		336,997.74	.0090
Miscellaneous General Expense		304,088.56	.0082
Total Distribution and Other Expenses		10,039,151.83	.2904
Retirement Expenses		1,328,969.38	.0356
Taxes (Includes Federal Income Tax of $1,099,839.04 and 2.95¢ per M.)		4,986,245.50	.1309
Interest on Unpaid Taxes		225,116.96	.0060
Total Cost of Gas Sold		36,026,348.37	.9651
Deduct - Miscel. Operating Revenue			
Gas Appliance Rents	$2,604,907.01		
Gross Profit from Sale of Appliances	561,069.19		
Interest on Bank Balances, etc.	98,160.56		
Miscellaneous Rent Revenue			
C.C. Building $144,876.08			
Miscellaneous Rents 194,228.86	339,101.94	3,603,238.70	.0965
Net Cost after giving effect to Miscel. Operating Revenue		$ 32,421,989.87	$ .8686
NOTE: The foregoing figures relate to the cost of the quality of gas actually supplied during the year 1923.			
Rate required for 8% Return on Investment in all Property used in the service of the System Gas Companies' Consumers (Schedule "A")			
Net Cost of all gas sold by the System Gas Companies to their consumers		$32,421,989.87	.8686
Return on Investment at 8% per annum		13,100,324.56	.3510
Add Federal Income Tax at 12½%	$1,678,328.31		
Less Federal Income Tax included above in item of net cost -	1,099,839.04	578,489.27	.0155
Total amount and "Flat" rate required to yield 8% return on Investment -		46,100,803.69	1.2351
Rate required for 8% Return on Present Replacement Cost (to the extent indicated) of all Property used in the Service of System Gas Companies' Consumers (Schedule "B")			
Net Cost of all gas sold by the System Gas Companies to their consumers		32,421,989.87	.8686
Return on Replacement cost at 8% per annum		20,940,569.45	.5611
Add Federal Income Tax at 12½% -	$2,798,361.87		
Less Federal Income Tax included above in item of net cost -	1,099,839.04	1,698,522.83	.0455
Total amount and "Flat" rate required to yield 8% Return on such Replacement cost -		55,061,072.15	1.4752

X Denotes Red in Copy

SCHEDULE "A"

SYSTEM GAS COMPANIES

Investment in all Property used in the Gas Business
December 31, 1923

Consolidated Gas Company of New York:			
Investment Owned and used in its Gas Business (per Plaintiff's Exh. #828 submitted in the present case)	$67,849,810.97		
Property owned and used by its Affiliated Gas Companies (Per Exhibit 823) -	1,783,239.25		
Portion of General Office property devoted to use of other companies -	1,940,489.30		$71,673,539.52
Astoria Light, Heat and Power Company:			
(Per Plaintiff's Exhibits Nos. 829 and 830) -			29,837,522.56
New Amsterdam Gas Co. (Inc. East River Co. of L.I.C.) -		(a)	27,311,777.54
Central Union Gas Company -		(a)	11,603,963.22
Northern Union Gas Company -		(a)	6,722,967.73
Standard Gas Light Company -		(a)	14,552,717.61
Total Investment, December 31, 1923 -			$161,702,488.17

(a) Based upon the investment June 30, 1922 found by the Public Service Commission per Opinion and Order dated August 30, 1922, its Cases Nos. 79 and 108, plus net additions to Fixed Capital at actual cost to December 31, 1923.

Return on Investment at 8% per annum:			
Total as above -	$161,702,488.17		
Add - Properties at 16th and 42nd Sts. which were withdrawn from service October 31,1923 -	2,461,882.37		
Investment upon which Return should be computed for 10 Mos. to Oct. 31, 1923 -	164,164,370.54	for 10 Mos. @ 8% p.a.-	$10,944,291.37
Add	161,702,488.17	for 2 Mos. @ 8% p.a.-	2,166,033.19
T o t a l -			13,100,324.56
Federal Income Tax at 12½% on the excess of Return on Investment over Fixed Charges ($13,100,324.56 minus $1,362,026.37 equals $11,749,298.18 divided by 87½% equals $13,426,626.49 x 12½%) -			$1,678,328.31
Investment per thousand cubic feet of gas sold during the Calendar Year 1923:			
5/6ths of $164,164,370.54 -	$136,803,642.11		
1/6th of 161,702,488.17 -	26,950,414.70		
Average Investment -	163,754,056.81 ÷ 37,324,773,700 c.f. -		$4.3873
Return on Investment at 8% per annum per thousand cubic feet of gas sold during the Calendar Year 1923 ($4.3873 x 8%) -			$.3510

Revised - 12/3/24.

SYSTEM GAS COMPANIES
COST OF PRODUCTION AND DISTRIBUTION OF GAS - YEAR 1923
EXCLUSIVE OF ITEMS ENUMERATED BELOW

		Amount	Per M.Cu.Ft. of Gas Sold
Cost of Production - per Exhibit 891		$18,746,744.89	$.5022
Cost of Distribution, etc.			
Total per Exhibit 891	$10,839,151.83		
Less items excluded:			
Gas Supply Inspection	$197,241.83		
Interest on Consumers Deposits	139,697.10		
Gas Rate Appeal and Expenses in re P.S.C. Hearings	137,423.72		
Total -	$474,362.65		
Cost of Distribution, excl. above		10,364,789.18	.2777
Retirement Expense			
Total per Exhibit 891	$1,328,989.39		
Less amount in excess of 3.50¢ rate	22,622.31	1,306,367.08	.0350
Taxes			
Total per Exhibit 891	$4,885,245.50		
Less taxes excluded:			
Gross Earnings tax applicable to gas sales in excess of $1.00 rate.	$19,899.06		
Duplicate assessments for Real Estate of Corporations Taxes	554,293.34		
Excess Dividends tax	48,805.41		
Real Estate taxes - 1/3 of land, Kingsbridge Station.	1,826.66		
Federal Income tax applicable to sales in excess of $1.00 rate.	329,477.95		
Total -	$954,302.42		
Taxes, excluding above		3,930,943.08	.1053
Interest on Unpaid Taxes			
Total per Exhibit 891	$225,116.96		
Less total amount excluded	225,116.96	-0-	-
Total Operating Expenses		$34,346,844.23	$.9202
Misc. Operating Revenue			
Total per Exhibit 891	$3,603,258.70		
Less Interest on Bank Balances	98,160.56	$3,505,098.14	.0939
Net Operating Expenses -		$30,943,746.09	$.8263

Attach to Ex. 891

CONSOLIDATED GAS COMPANY OF NEW YORK
PROOF OF COST OF PRODUCTION & DISTRIBUTION OF GAS
EXCLUSIVE OF ITEMS ENUMERATED, PER ATTACHED STATEMENT
WITH PLAINTIFF'S EXHIBIT NO. 891.
SYSTEM COMPANIES - YEAR 1923

	Amount	Per M.Cu.Ft. of Gas Sold
Cost of Production and Distribution		
per attached statement	$30,843,746.09	$.8263
Items Excluded		
Operating Expenses		
Cost of Distribution	$474,362.65	$.0127
Retirement Expense	22,622.31	.0006
Taxes	954,302.42	.0256
Interest on Unpaid Taxes	225,116.96	.0060
Misc. Operating Revenues		
Interest on Bank Balances	98,160.56 X	.0026 X
Net Total of Items Excluded	$ 1,578,243.78	$ .0423
Net Cost of Production & Distribution		
Gas per Pl. Ex. 888.	$32,421,989.87	$ .8666

X Denotes Red in Copy

Attach to Ex 891

Pltf #891.

110. The effect of the enforcement of the said Chapter 599 of the Laws of 1923 upon the operations of the Consolidated System Gas Companies, if applied to their actual gas operations for the year 1923, after eliminating therefrom all inter-company charges and excluding all return on property or investment actually paid by one gas company to another for the use of property and/or facilities, as hereinbefore found by me in Finding No. 73, would have been as follows:

SYSTEM COMPANIES, YEAR 1923.

	Amount	Per M.Cu.Ft. of Gas Sold
Cost of production	$18,746,744.89	$.5022
Cost of distribution, etc.	10,364,789.18	.2777
Taxes	3,930,943.08	.1053
Retirement expense	1,306,367.08	.0350
Total Operating expenses	$34,348,844.23	$.9202
Miscellaneous Operating revenue	3,505,098.14	.0939
Net operating expenses	$30,843,746.09	$.8263
Additional cost of supplying gas of statutory calorific content	1,937,155.76	.0519
Net cost of gas of statutory standard	$32,780,901.85	$.8782
Gross revenue from sales of gas at statutory rates:		
Commercial sales, 37,107,564,300 c.f. at $1.00 M. c.f.	$37,107,564.30	$1.00
Municipal Sales, 217,209,400 c.f. at $.75 M. c.f.	162,907.05	.75
Total	$37,270,471.35	$ .9985
Net income at statutory standard and rates applicable to the total used and useful property of the said companies.	$4,489,569.50	$ .1203

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(Pltf.'s Ex. No. 891).

110. (Continued)

Such net income would have yielded a return of only per cent. upon the minimum investment as of December 31, 1923 in the property of the said System Companies used and useful in the gas business; and such amount of return each would have been and is inadequate, unreasonably low, confiscatory of the property of those companies and violative of their constitutional rights.

SCHEDULE "B"

SYSTEM GAS COMPANIES

PROPERTY USED IN THE GAS BUSINESS DECEMBER 31ST, 1923.

Including Property of the Consolidated and Astoria Companies on basis of Replacement Cost, as indicated by Exhibits in the present case and Property of other System Gas Companies on the basis of Investment, June 30, 1922, found by the Public Service Commission plus net additions to Fixed Capital at actual Cost to December 31, 1923.

Consolidated Gas Company of New York		
Replacement Cost (per Exhibits 666 and 667)		$140,912,165.47
Add - Replacement cost of General Office Building devoted to use of other companies 61.08% of $8,439,907.09 -		5,215,863.07
Total -		$146,128,028.54
Astoria Light, Heat and Power Company		
Replacement Cost (Exhibits 866x, 868x and 886)		46,990,927.07
New Amsterdam Gas Co. (Incl. East River Gas Co. of L.I.C.)	(a)	27,311,777.84
Central Union Gas Company	(a)	11,603,963.22
Northern Union Gas Company	(a)	6,722,967.72
Standard Gas Light Company	(a)	14,452,717.61
Total Investment, December 31, 1923		$ 253,410,381.70

(a) Based upon the Investment, June 30, 1922 found by the Public Service Commission, per Opinion and Order dated August 30, 1922 its cases Nos. 79 and 108 plus net additions to Fixed Capital at actual cost to December 31, 1923.

Return on Investment at 8% per annum			
Total as above	$253,410,381.70		
Add - Property at 149th and 42nd Sts. Stations which were withdrawn from service Oct. 31, 1923	10,018,933.00		
Investment upon which Return should be computed for 10 Mos. to Oct. 31, 1923	263,426,318.80	for 10 Mos.@ 8% per ann.	$ 17,561,754.36
Add -	253,410,381.70	" 2 " " "	3,378,805.09
Total			$ 20,940,559.45

Federal Income Tax at 12½% on the excess of Return on Investment over Fixed Charges ($20,940,559.45 minus $1,382,026.37 equals $19,558,533.08 divided by 87½% equals $22,366,894.96 x 12½%) $ 2,795,861.87

Investment per thousand cubic feet of gas sold during the calendar year 1923			
5/6ths of $263,426,318.80 =	$219,521,929.68		
1/6th " 253,410,381.70	42,235,063.61		
Total Average Investment	$261,756,993.19	÷ 37,324,775,700 cubic feet =	$ 7.0130

Return on Investment at 8% per annum per thousand cubic feet of gas sold during the calendar year 1923 ($7.0130 x 8%) = $ .5611

PLAINTIFF'S EXHIBIT NO. 892

SYSTEM GAS COMPANIES

COST OF PRODUCTION AND DISTRIBUTION OF GAS

FOR THE

CALENDAR YEAR 1922

NOTE - The figures herein relate to the cost of the quality of gas actually supplied during the year 1922.

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1922 AND THE N.Y. MUTUAL GAS LIGHT COMPANY FOR THE EIGHT MONTHS ENDED AUGUST 31, 1922.

QUANTITIES OF MATERIALS AND LABOR - COAL GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

Cost of Production - Coal Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Caking Coal	490,946.37 gr. tons	201.1648 lbs.	$7.7759 per gr. ton	$ 3,817,537.97	$ .6983
Handling				152,348.86	.0279
Total Caking Coal				3,969,886.83	.7262
Residuals					
Coke	466,680.54 chalds.	.0894 chlds.	$.4233 per chald.	2,650,263.23	.4848
Coal Tar	5,694,052 gals.	1.0416 gals.	.0487 " gal.	277,035.97	.0507
Ammoniacal Liquor	880,426 lbs.	.1611 lbs.	.0264 " lb.	23,275.02	.0042
Cyanogen	742,365 "	.1358 "	.1833 " "	136,094.16	.0249
Ammonia	192,956 "	.0353 "	.0958 " "	18,493.62	.0034
Ammonia Sulphate	7,070,771 "	1.2934 "	.0306 " "	217,083.96	.0398
Carbon	92,750 "	.0170 "	.0100 " "	927.50	.0002
Ammonium Concentrate	35,683 gals.	.0065 gals.	.1196 " gal.	4,266.98	.0008
Total Credit from Residuals				3,328,242.46	.6086
Less Residual Expense					
Coke				126,285.19	.0231
Other Residuals				191,507.45	.0350
Total Deductions				317,792.64	.0581
Net Credit from Residuals				3,010,449.82	.5507
Net Cost of Coal Carb'd.				959,437.01	.1755
Bench Fuel - Coke	112,725,810 lbs.	20.6202 lbs.	.3687 per C.lbs.	415,602.30	.0760
Oil Tar	49,710 gals.	.0091 gals.	.0478 " gal.	2,376.13	.0004
Boiler Fuel- Coal	373.15 gr. tons	.1529 lbs.	9.3741 " gr. ton	3,497.96	.0007
Coke	28,748,840 lbs.	5.2588 "	.2936 " C.lbs.	84,396.13	.0154
Oil Tar	1,664,622 gals.	.3045 gals.	.0478 " gal.	79,566.90	.0146
Handling - Boiler Fuel				3,460.45	.0006
Total Boiler & Bench Fuel				588,901.87	.1077
Total Coal Carbonized and Boiler Fuel				1,548,338.88	.2832
Gas Oil	6,863,435 gals.	1.2555 gals.	.0576 per gal.	394,706.79	.0722
Iron Mass	128,597 bus.	.0235 bus.	.2672 " bu.	34,359.37	.0063
Water	23,945,170 cu.ft.	4.3801 cu.ft.	1.00 " M.c.f.	23,945.17	.0044
Sundry Supplies				9,178.01	.0017
Cartage - Spent Material				354.43	-
Total Materials				2,010,882.65	.3678
Residuals - Tar	1,314,440 gals.	.2404 gals.	.0452 per gal.	59,413.68	.0108
Drip Oil	50,941 "	.0093 "	.0496 " "	2,520.37	.0005
Total Residuals				61,934.05	.0113
Net Materials				1,948,948.60	.3565
Gas Making Labor				474,635.39	.0868
Elec. Power House Operating				80,397.07	.0147
Total Mat'ls & Labor				2,503,981.06	.4580
Repairs - Labor				321,778.41	.0589
Material				206,875.69	.0378
Miscel. Works Expense				159,986.48	.0293
Total (Excluding Gas Storage)				$ 3,192,621.64	$ .5840
Gas Made - Cubic Feet	5,466,762,000				

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1922 AND THE N.Y. MUTUAL GAS LIGHT COMPANY FOR THE EIGHT MONTHS ENDED AUGUST 31, 1922.

QUANTITIES OF MATERIALS AND LABOR - WATER GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

Cost of Production - Water Gas	Quantity		Quantity Per M. Cu. Ft. Made		Unit Price		Amount	Cost per M. Cu.Ft. Made
Coal in Generators	173,654.65	gr. tons	12.5827	lbs.	$10.5768	per gr. ton	$1,836,703.63	$ .0594
Coke " "	629,952,492	lbs.	20.3773	"	.3660	" C. lbs.	2,431,550.45	.0787
Water Gas Tar in Generators	2,837,239	"	.0918	"	.0054	" lb.	15,339.45	.0005
Coal under Boilers	23,436.49	gr. tons	1.6982	"	10.5342	" gr. ton	246,884.89	.0080
Coke under Boilers	101,002,436	lbs.	3.2698	"	.3275	" C. lbs.	331,091.79	.0107
Water Gas Tar under Boilers	17,210,148	gals.	.5567	gals.	.0478	" gal.	822,645.14	.0266
Handling - Generator Fuel							208,098.38	.0067
" Boiler Fuel							33,960.84	.0011
Total Water Gas Fuel							5,926,274.27	.1917
Gas Oil	126,321,462	gals.	4.0862	gals.	.0574	per gal.	7,252,231.50	.2346
Iron Mass	245,310	bus.	.0079	bus.	.2564	" bu.	62,894.72	.0020
Water	61,642,217	cu.ft.	1.9940	cu.ft.	1.00	" M.c.f.	61,642.21	.0020
Sundry Supplies							26,574.11	.0008
Cartage - Spent Material							60,862.74	.0020
Total Materials							13,390,479.55	.4331
Residuals - Water Gas Tar	24,234,345	gals.	.7839	gals.	.0474	per gal.	1,149,336.93	.0372
Drip Oil	904,371	"	.0292	"	.0506	" "	45,746.13	.0015
Total Residuals							1,195,083.06	.0387
Residual Expense							10,961.72	.0004
Net Credit from Residuals							1,184,121.34	.0383
Net Materials							12,206,358.21	.3948
Gas Making Labor							930,973.32	.0301
Electric Power House Operating							51,533.85	.0017
Total Materials and Labor							13,188,865.38	.4266
Repairs - Labor							647,451.39	.0209
Material							509,525.74	.0165
Miscellaneous Works Expense							403,492.23	.0131
Total (Excl. Gas Storage)							$14,749,334.74	$.4771

Gas Made (Cubic Feet) 30,914,389,000

B.

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1922 AND THE N.Y. MUTUAL GAS LIGHT COMPANY FOR THE EIGHT MONTHS ENDED AUGUST 31ST, 1922.

COMBINED COAL AND WATER GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

	Cubic Feet	Amount	Cost per M. Cubic Feet
Coal Gas Made (excl. Gas Storage) Brought Forward	5,466,762,000	$3,192,621.64	$.6040
Water " " " " " " "	30,914,389,000	14,749,334.74	.4771
Total Station Cost (Excl. Gas Storage)	36,381,151,000	17,941,956.38	.4932
Gas Storage at Works and Distributing Stations		379,103.90	.0104
Total Cost of Production Coal and Water Gas	36,381,151,000	18,321,060.28	.5036
Loss, Gas Transferred by Northern Union Gas Co. to the Westchester Ltg. Co. and Bronx Gas & Electric Co.	91,637,400	47,314.24	.5163
Net Cost of Production Coal and Water Gas	36,289,513,600	18,273,746.04	.5036

GAS ACCOUNT - (CUBIC FEET)

Gas on Hand - January 1st, 1922	84,769,000	
Gas Made - Coal Gas	5,466,762,000	
Water Gas	30,914,389,000	
T o t a l	36,466,920,000	
Less Gas on Hand December 31, 1922	106,574,000	
Total Send Out	36,359,346,000	
Less Gas Transferred by Northern Union Gas Co.		
To Westchester Lighting Co.	90,710,600	
Bronx Gas & Electric Co.	926,800	
Total Transferred to Other Cos.	91,637,400	
Net Total to be Accounted for	36,267,708,600	
Sold to Consumers	33,792,760,800	
Used by Companies	94,303,600	
Unaccounted for due to Condensation, etc.	2,380,644,200	- 6.56%
T o t a l	36,267,708,600	
Ratio of Sales to Net Make	93.12%	

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, BOROUGH UNION AND STANDARD GAS COMPANIES FOR THE CALENDAR YEAR 1922 AND THE NEW YORK MUTUAL GAS LIGHT COMPANY FOR THE EIGHT MONTHS ENDED AUGUST 31, 1923.

COMBINED COAL AND WATER GAS
(EXCLUDING ALL INTER COMPANY CHARGES)

			Amount	Per M. Cu. Ft. Sold
Cost of Production (Brought Forward - Gas Sales Cu.Ft. 32,792,760,000)			$18,273,746.04	$ .5608
Distribution and Other Expenses				
Distribution, Superintendence, Supplies and Expenses			882,290.20	.0261
Meter and Installation Work			809,916.90	.0240
Work on Consumers' Premises			978,060.28	.0289
Gas Supply Inspection			164,602.01	.0049
Repairs on Street Mains and Tunnels			404,857.20	.0120
Services			214,772.84	.0064
Meters			1,057,257.14	.0313
Buildings			41,210.21	.0012
Tools			49,446.58	.0015
Gas Appliances			394,879.97	.0117
Public Street Lighting			984.76	-
Commercial Expenses			2,579,883.86	.0764
Salaries of General Office			643,918.40	.0191
Supplies and Expenses of General Office			227,298.16	.0067
Legal Expense			233,496.38	.0069
Claims and Arrears Expense			40,290.40	.0012
Insurance			335,630.45	.0099
Vacation and Sickness			179,743.58	.0053
Contributions to Employees Aid Society			113,000.16	.0033
Superannuation			168,088.87	.0049
Stable Expense			86,031.36	.0025
Automobile Expense			215,853.99	.0063
Claims for Damages			32,284.28	.0009
Undistributed Adjustments			76,138.36X	.0023X
Duplicate Gas Charges			111,401.36X	.0033X
Uncollectible Bills			135,683.60	.0040
Interest on Consumers' Deposits			144,257.57	.0043
Rate Case Appeal			108,908.98	.0031
Expense re P.S.C. Hearings			48,481.65	.0013
Miscellaneous General Expense			304,920.79	.0091
Total Cost of Distribution and Other Expenses			10,413,012.64	.3081
Retirement Expense			1,190,065.08	.0352
Taxes (Includes Federal Income Tax of $929,127.09 and 2.75¢ per M.)			4,568,289.11	.1365
Interest on Unpaid Taxes			224,222.40	.0031
Total Cost of Gas Sold			34,697,333.03	1.0267
Deduct - Miscellaneous Operating Revenue				
Gas Appliance Rents		$2,633,677.18		
Gross Profit from Sale of Appliances		522,709.80		
Interest on Bank Balances, etc.		95,113.56		
Miscellaneous Rent Revenue				
C.O. Building	$136,752.60			
Miscellaneous Rents	85,954.05	222,706.65	3,479,207.17	.1029
Net Cost after giving effect to Miscel. Operating Revenue			$31,217,994.86	$.9238
NOTE - The foregoing figures relate to the cost of the quality of gas actually supplied during the year 1922.				
Rate required for 8% Return on Investment in all property used in the service of the System Gas Companies' Consumers (Schedule "A")				
Net cost of all gas sold by the System Gas Companies to their consumers			$31,217,994.86	.9236
Return on Investment at 8% per annum -			12,866,293.31	.3715
Add Federal Income Tax at 12½% -		$1,567,581.13		
Less Federal Income Tax included above in item of Net Cost -		929,127.09	638,454.14	.0189
Total amount and "Flat" rate required to yield 8% Return on Investment -			44,411,742.30	$1.3142
Rate required for 8% Return on Present Replacement Cost (to the extent indicated) of all Property used in the service of the System Gas Companies' Consumers (Schedule "B")				
Net cost of all gas sold by the System Gas Companies to their consumers			$1,217,994.86	.9236
Return on Replacement Cost at 8% per annum -			20,643,683.36	.6109
Add Federal Income Tax at 12½% -		$2,723,061.84		
Less Federal Income Tax included above in Item of Net Cost -		929,127.09	1,793,934.15	.0531
Total amount and "Flat" rate required to yield 8% Return on such Replacement Cost -			53,655,582.36	$1.5876

X Denotes Red in Copy

SCHEDULE "A"

SYSTEM GAS COMPANIES

INVESTMENT IN ALL PROPERTY USED IN THE GAS BUSINESS DECEMBER 31, 1922

Consolidated Gas Company of New York:			
Investment Owned and Used in its Gas Business (per Plaintiff's Exh. 828 submitted in the present case)	$63,791,798.32		
Add - Property owned by Consolidated Gas Co. and used by its affiliated Gas Companies (per Exh. 828) -	3,281,037.06		
Add - Portion of General Office Investment - devoted to other Companies (64.84%) -	2,034,899.33		
Total Investment owned by the Consolidated Gas Company and used in the Gas Business - December 31, 1922 -			$69,097,734.71
Astoria Light, Heat and Power Company:			
(Per Plaintiff's Exhibits #829 and 830) -			28,449,744.29
New Amsterdam Gas Co. & East River Gas Co. of L.I.C. -		(a)	27,122,834.66
Central Union Gas Company -		(a)	11,345,974.53
Northern Union Gas Company -		(a)	6,203,022.34
Standard Gas Light Company -		(a)	14,721,855.85
Total Investment used in the Gas Business, Dec. 31, 1922 -			$156,941,166.38

(a) Based upon the investment June 30, 1922 found by the Public Service Commission, per Opinion and Order dated August 30, 1922 its Cases Nos. 79 and 108, plus net additions to Fixed Capital at actual cost to December 31, 1922.

Return on Investment at 8% per annum -	$12,555,293.31
Federal Income Tax at 12½% on the excess of Return on Investment over Fixed Charges ($12,555,293.31 minus $1,582,224.71 equals $10,973,068.60 divided by 87½ equals $12,540,649.83 x 12½%) -	$1,567,581.23
Investment per thousand cubic feet of gas sold during the Calendar year 1922 ($156,941,166.38 divided by 33,792,760,000 c.f.) -	$4.6442
Return on Investment at 8% per annum per thousand cubic feet of gas sold during the Calendar year 1922 ($4.6442 x 8%) -	$.3715

Revised - 12/3/24.

SYSTEM GAS COMPANIES
COST OF PRODUCTION AND DISTRIBUTION OF GAS - YEAR 1922
EXCLUSIVE OF ITEMS ENUMERATED BELOW

		Amount	Per M.Cu.Ft. of Gas Sold
Cost of Production, per Ex. 892		$18,273,746.04	$.5408
Cost of Distribution, etc.			
Total per Exhibit 892	$10,413,012.44		
Less items excluded:			
Gas Supply Inspection	$164,802.01		
Interest on Consumers Deposits	140,557.87		
Rate Case Appeal	105,708.98		
Expenses in re P.S.C. Hearings	43,491.65		
Total	$454,560.51	9,958,451.93	.2947
Retirement Expense,			
Total per Exhibit 892	$1,190,043.03		
Less amount in excess of 3.50¢ rate	7,296.40	1,182,746.63	.0350
Taxes:			
Total per Exhibit 892	$4,545,558.11		
Less items excluded:			
Gross Earnings taxes applicable to gas sales in excess of $1.00 rate	$38,878.92		
Disputed assessments for Real Estate of Corporations taxes	553,573.60		
Excess Dividends tax	28,368.23		
Real Estate Taxes - 1/3 of land, Kingsbridge Station	1,833.33		
Federal Income Tax actually paid, (Note:- There would have been no Federal income tax in 1922 if the $1.00 rate had been in effect).	929,127.09		
Total	$1,551,781.17		
Taxes, excluding above		2,993,776.94	.0885
Interest on Unpaid Taxes			
Total per Exhibit 892	$274,922.40		
Less total amount excluded	274,922.40	-0-	-
Total operating expenses		$32,408,721.54	$ .9590
Misc. Operating Revenue:			
Total per Exhibit 892	$3,479,287.17		
Less Interest on Bank Balances	95,113.54	3,384,173.63	.1001
Net Operating Expenses		$29,024,547.91	$ .8589

CONSOLIDATED GAS COMPANY OF NEW YORK
PROOF OF COST OF PRODUCTION & DISTRIBUTION OF GAS
EXCLUSIVE OF ITEMS ENUMERATED, PER ATTACHED STATEMENT
WITH PLAINTIFF'S EXHIBIT NO. 892
SYSTEM COMPANIES - YEAR 1922

	Amount	Per M.Cu.Ft. of Gas Sold
Cost of Production and Distribution		
per attached statement	$29,024,547.91	$.8589
Items Excluded		
Operating Expense		
Cost of Distribution	$454,560.51	.0134
Retirement Expense	7,296.40	.0002
Taxes	1,551,781.17	.0460
Interest on Unpaid Taxes	274,922.40	.0081
Misc. Operating Revenues		
Interest on Bank Balances	95,113.54X	.0028X
Net Total of Items Excluded	$ 2,193,446.94	$ .0649
Net Cost of Production & Distribution of		
Gas per Pl. Ex. 889.	$31,217,994.85	$ .9238

X Denotes Red in Copy

SCHEDULE "B"

SYSTEM GAS COMPANIES

INVESTMENT EMPLOYED IN THE GAS BUSINESS
DECEMBER 31, 1922

Including Property of the Consolidated and Astoria Companies on the basis of Replacement Cost and the property of other System Gas Companies on the basis of Investment, June 30, 1922, found by the Public Service Commission plus Net Additions to Fixed Capital at Actual Cost to December 31, 1922

Consolidated Gas Company of New York:		
Replacement Cost June 1st, 1923 (per Exh. 856) Less Net Additions to Fixed Capital at actual cost during the five months to May 31, 1923 of $406,782.75 -		$147,028,468.24
Add - Replacement cost of General Office property devoted to other Companies (64.84% of $8,439,907.89) -		5,472,436.28
T o t a l -		152,500,904.52
Astoria Light, Heat and Power Company:		
Replacement cost June 1st, 1923 (Exhibit 865x) Less portion of Luyster Creek property devoted to use of N.Y.Edison Co. (Exh.868x) and net additions to Fixed Capital during the five months to May 31,1923 of $749,861.71 -		46,161,074.96
New Amsterdam Gas Company (Incl. East River Gas Co. of L.I.C.) -	(a)	27,112,834.66
Central Union Gas Company -	(a)	11,345,974.63
Northern Union Gas Company -	(a)	6,213,022.34
Standard Gas Light Company -	(a)	14,721,856.85
Total as of December 31, 1922 -		$258,046,666.86

(a) On basis of Investment June 30, 1922 found by the Public Service Commission per Opinion and Order dated August 30, 1922 its Cases Nos. 79 and 108 plus net additions to Fixed Capital at actual cost to December 31, 1922 .

Return on above Investment at 8% per annum -	$20,643,653.35
Federal Income Tax at 12½% on the excess of Return at 8% over Fixed charges ($20,643,653.35 m i n u s $1,682,224.71 equals $19,061,428.64 divided by 87½% equals $21,784,489.86 x 12½%) -	2,723,061.24
Return on above Investment per thousand cubic feet of gas sold during the calendar year 1922 ($258,046,666.86 divided by 33,792,760,800 c. f.) -	$7.6361
Return on above Investment at 8% per annum, per thousand cubic feet of gas sold during the Calendar Year 1922($7.6361 x 8%)-	$.6109

TRANSCRIPT OF RECORD

Vol. VI

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1926

No. 357

ALBERT OTTINGER, AS ATTORNEY GENERAL OF THE STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK

FILED APRIL 30, 1926

(31,886)

(31,886)

SUPREME COURT OF THE UNITED STATES

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APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK

VOLUME VI

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Plaintiff's Exhibit 975—Report of chief engineer in re sale of N. Y. Mutual Gas Light Co.'s property to Consolidated Gas Co.	4172	2819

JUDD & DETWEILER (INC.), PRINTERS, WASHINGTON, D. C., JULY 17, 1926

150235

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[fol. 4148½] PLAINTIFF'S EXHIBIT NO. 893 FOR IDENTIFICATION ONLY

Reference Data in Connection with Study of Going Value of the Consolidated Gas Company of New York

Prepared by Walter R. Addicks, Vice-President

(Checked and Verified for Mr. Addicks by Herbert C. Davidson, Assistant Secretary)

[fol. 4149] Consolidated Gas Company of New York

Value and Growth of Gas Sales

Year	M cu. ft. of gas sold	Increase Amount	Increase %	Revenue from sales of gas	Increase Amount	Increase %
Nov. 11, Dec. 31, 1884	559,957	.....	.....	$943,765.02	$	.....
1885	3,942,433	.....	.....	6,799,465.14	.....	.....
1886	4,192,689	250,256	6.3	6,138,975.99	660,489.15*	9.7*
1887	4,844,514	651,825	15.5	6,098,774.67	40,301.32*	.7*
1888	5,382,147	537,633	11.1	6,763,066.98	664,292.31	10.9
1889	5,615,509	233,362	4.5	7,055,000.34	291,933.36	4.3
1890	5,904,343	288,834	5.1	7,420,516.41	365,516.07	5.2
1891	6,269,804	365,461	6.2	7,871,489.93	450,973.52	6.1

[*Red in copy.]

Value and Growth of Gas Sales—Continued

Year	M cu. ft. of gas sold	Increase Amount	Increase %	Revenue from sales of gas	Increase Amount	Increase %
1892	6,581,954	312,150	5.0	8,259,849.57	388,359.64	4.9
1893	6,854,014	272,060	4.1	8,599,519.86	339,670.29	4.1
1894	6,731,325	122,669*	1.8*	8,448,008.84	151,511.02*	1.8*
1895	6,736,461	5,136	1.1	8,455,736.19	7,727.35	.1
1896	6,837,571	101,110	1.5	8,585,038.06	129,301.87	1.5
1897	6,790,864	66,707*	.7*	8,302,778.23	282,259.83*	3.3*
1898	7,306,829	515,965	7.6	8,416,316.12	113,537.89	1.4
1899	8,615,523	1,308,694	17.9	7,285,491.89	1,130,824.23*	13.4*
1900	9,898,001	1,282,478	14.9	8,275,818.09	990,426.20	13.6
1901	10,296,955	398,954	4.0	10,339,766.18	2,063,848.09	24.9
1902	11,494,838	1,197,883	11.6	11,505,395.71	1,165,629.53	11.3
1903	12,766,545	1,271,707	11.1	12,775,698.75	1,270,303.04	11.0
1904	13,170,760	404,215	3.2	13,169,523.27	393,824.52	3.1
1905	13,283,163.8	112,403.8	.9	13,553,802.97	384,279.70	2.9
1906	13,879,727.7	596,563.9	4.5	12,290,236.83	1,263,566.14*	9.3*
1907	14,752,230.5	872,502.8	6.3	11,835,202.47	456,034.36*	3.7*
1908	14,381,174.3	371,056.2*	2.5*	11,529,486 44	305,716 03*	2 6*
1909	15,298,837.1	917,662.8	6.4	12,210,074.59	680,588.15	5.9
1910	16,044,272.7	745,435.6	4.9	12,813,166.76	603,092.17	4.9
1911	16,175,163.2	130,890.5	.8	12,917,821.62	104,654.86	.8
1912	16,641,107.6	465,944.4	2.9	13,292,187.23	374,365.61	2.9
1913	16,553,735.7	87,371.9*	.5*	13,222,497.51	69,689.72*	.6*

1914	16,508,900.7	44,835.0*	.3	13,183,799.19	38,698.32*	.3*
1915	16,679,825.3	829,075.4*	5.0*	12,524,466.32	659,332.87*	5.0*
1916	15,295,126.6	615,301.3	3.9	13,023,164.03	498,697.71	4.0
1917	16,891,064.1	595,937.5	3.7	13,499,822.70	476,658.67	3.7
1918	18,029,245.0	1,138,180.9	6.7	14,406,943.35	907,120.65	6.7
1919	18,576,440.3	547,195.3	3.0	14,848,279.50	441,336.15	3.1
1920	20,753,111.6	2,176,671.3	11.7	19,393,050.40	4,544,770.94	30.6
1921	19,396,607.1	1,356,504.5*	6.5*	25,697,356.34	6,304,305.90	32.5
1922	20,580,285.6	1,183,678.5	6.1	25,171,496.28	528,860.06*	2.0*
1923	24,057,694.2	3,477,408.6	16.9	25,968,078.77	796,582.49	3.2

[*Red in copy.]

[fol. 4150] Consolidated Gas Company of New York

Meters in Active Service

Year	Number as of December 31	Increase	
		Amount	%
1885	109,397		
1886	114,032	4,635	4 2
1887	126,100	12,068	10 06
1888	135,465	9,365	7 4
1889	144,789	9,324	6 9
1890	155,153	10,364	7 2
1891	163,588	8,435	5 4
1892	171,920	8,332	5 1
1893	181,023	9,103	5 3
1894	182,480	1,457	8
1895	199,149	16,669	9 1
1896	213,199	14,050	7 1
1897	223,437	10,238	4 8
1898	253,616	30,179	13 5
1899	289,367	35,751	14 1
1900	311,960	22,593	7 8
1901	334,620	22,660	7 3
1902	354,016	19,396	5 8
1903	365,641	11,625	5 3
1904	373,886	8,245	2 3
1905	390,330	16,444	4 4
1906	408,303	17,973	4 6
1907	429,038	20,735	5 1
1908	433,050	4,012	9
1909	446,306	13,256	3 1
1910	469,571	23,265	5 2
1911	477,049	7,478	1 6
1912	483,727	6,678	1 4
1913	486,676	2,949	6
1914	486,958	282	1
1915	489,275	2,317	5
1916	497,470	8,195	1 7
1917	502,566	5,096	1 0
1918	501,120	1,446†	3†
1919	504,891	3,771	8
1920	517,209	12,318	2 4
1921	514,811	2,598†	5†
1922*	556,080	41,269	8 0
1923*	560,292	4,212	8

*Includes 45,014 active meters purchased from N. Y. Mutual Gas Lig't Co. as of August 31, 1922. [†Red in copy.]

[fol. 4151] Consolidated Gas Company of New York

Sales Per Meter and Increased Use of Gas

Year	Cubic feet of gas sold	Number of meters as of December 31st	Increase (per cent)	Annual sales per meter (cubic feet)	Increase (per cent)
1885	3,942,433,000	109,397	....	....	....
1886	4,192,689,000	114,032	4 2	36,768	....
1887	4,844,514,000	126,100	10 6	38,418	4 5
1888	5,382,147,000	135,465	7 4	39,731	3 4
1889	5,615,509,000	144,789	6 9	38,784	2 4†
1890	5,904,343,000	155,153	7 2	38,055	1 9†
1891	6,269,804,000	163,583	5 4	38,327	7
1892	6,581,954,000	171,920	5 1	38,285	1†
1893	6,854,014,000	181,023	5 3	37,863	1 1†
1894	6,731,325,000	182,480	8	36,888	1 9†
1895	6,736,461,000	199,149	9 1	33,826	8 3†
1896	6,837,571,000	213,199	7 1	32,071	5 2†
1897	6,790,864,000	223,437	4 8	30,393	5 2†
1898	7,306,829,000	253,616	13 5	28,811	5 2†
1899	8,615,523,000	289,367	14 1	29,774	3 3
1900	9,898,001,000	311,960	7 8	31,728	6 6
1901	10,296,955,000	334,620	7 3	30,772	3 0†
1902	11,494,838,000	354,016	5 8	32,470	5 5
1903	12,766,545,000	365,641	3 3	34,916	7 5
1904	13,170,760,000	373,886	2 3	35,227	9
1905	13,283,163,800	390,330	4 4	34,031	3 4†
1906	13,879,727,700	408,303	4 6	33,994	1†
1907	14,752,230,500	429,036	5 1	34,385	1 2
1908	14,381,174,300	433,050	9	33,209	3 4†
1909	15,298,837,100	446,306	3 1	34,279	3 2
1910	16,044,272,700	469,571	5 2	34,168	3†
1911	16,175,163,200	477,049	1 6	33,907	8†
1912	16,641,107,600	483,727	1 4	34,402	1 5
1913	16,553,735,700	486,676	6	34,014	1 1†
1914	16,508,900,700	486,958	1	33,902	3†
1915	15,679,825,300	489,275	5	32,047	5 5†
1916	16,295,126,600	497,470	1 7	32,756	2 2
1917	16,891,064,100	502,566	1 0	33,610	2 6
1918	18,029,245,000	501,120	3†	35,978	7 0
1919	18,576,440,300	504,891	8	36,793	2 3
1920	20,753,111,600	517,209	2 4	40,125	9 1
1921	19,396,607,100	514,811	5†	37,677	6 1†
1922	20,580,285,600	556,080*	8 0	37,010	1 8†
1923	24,057,694,200	560,292*	8	42,938	16 0

*Includes 45,014 active meters purchased from New York Mutual Gas Light Company as of August 31, 1922. [†Red in copy.]

[fol. 4152] Consolidated Gas Company of New York

Miles of Mains and Saturation of Territory

Year	Miles of mains (active)	% of increase	Annual sales per mile of mains (M cubic feet)	Meters per mile of mains
1885	711 64		5,540	154
1886	720 92	1 3	5,816	158
1887	733 18	1 7	6,608	172
1888	747 24	1 9	7,203	181
1889	760 09	1 7	7,388	190
1890	763 94	5	7,729	203
1891	767 25	4	8,172	213
1892	777 15	1 3	8,469	221
1893	777 75	1	8,813	233
1894	785 22	1 0	8,573	232
1895	788 84	5	8,540	252
1896	790 88	3	8,646	270
1897	792 55	2	8,569	282
1898	802 66	1 3	9,103	316
1899	802 82		10,732	360
1900	805 74	4	12,284	387
1901	811 15	7	12,694	413
1902	801 59	1 2*	14,340	442
1903	792 12	1 2*	16,117	462
1904	793 11	1	16,606	471
1905	795 47	3	16,699	491
1906	796 05	1	17,436	213
1907	786 18	1 2*	18,764	546
1908	795 99	1 2	18,067	544
1909	797 20	2	19,191	560
1910	807 86	1 3	19,860	581
1911	814 57	8	19,857	586
1912	819 12	6	20,316	591
1913	819 78	1	20,193	594
1914	820 67	1	20,116	593
1915	820 22	1*	19,117	597
1916	820 40		19,882	606
1917	819 29	1*	20,617	613
1918	820 95	2	21,961	610
1919	820 42	1*	22,643	615
1920	816 67	5*	25,412	633
1921	814 79	2*	23,806	632
1922	986 72	21 1	20,857	564
1923	986 75	...	24,381	568

[*Red in copy.]

[fol. 4153] Consolidated Gas Company of New York

Financial History of the Company as to Volume and Growth of Investment

Year	Investment as to December 31	Increase	
		Amount	%
1884 (Nov. 11th)	$37,881,764 13	.....	..
1886	38,343,325 98	228,094 63	.6
1887	38,968,688 21	625,362 23	1 6
1888	39,903,210 91	934,522 70	2 4
1889	40,595,352 64	692,141 73	1 7
1890	40,985,927 83	390,575 19	1 0
1891	41,628,521 87	642,594 04	1 6
1892	42,378,166 63	749,644 76	1 8
1893	43,307,071 66	928,905 03	2 2
1894	43,799,726 94	492,655 28	1 1
1895	44,089,267 59	289,540 65	.7
1896	44,289,429 41	200,161 82	.5
1897	44,511,084 07	221,654 66	.5
1898	44,965,243 29	454,159 22	1 0
1899	45,549,983 80	584,740 51	1 3
1900	45,753,806 72	203,822 92	.4
1901	46,318,914 27	565,107 55	1 2
1902	46,514,471 26	195,556 99	.4
1903	46,655,375 08	140,903 82	.3
1904	47,267,088 35	611,713 27	1 3
1905	47,252,980 56	14,107 79†	
1906	47,994,547 15	741,566 59	1 6
1907	48,463,481 25	468,934 10	1 0
1908	48,397,320 86	66,160 39†	.1†
1909	48,948,074 60	550,753 74	1 1
1910	50,536,519 02	1,588,444 42	3 2
1911	52,206,032 58	1,669,513 56	3 3
1912	53,262,668 67	1,056,636 09	2 0
1913	54,112,533 85	849,865 18	1 6
1914	54,242,209 78	129,675 93	.2
1915	54,385,149 33	142,939 55	.3
1916	54,060,833 20	324,316 13†	.6†
1917	54,049,787 61	11,045 59†	..
1918	54,182,025 49	132,237 88	.2

[†Red in copy.]

Year	Investment as to December 31	Increase Amount	Increase %
1919	54,550,283 51	368,258 02	.7
1920	54,828,630 94	278,347 43	.5
1921	55,246,040 16	417,409 22	.8
1922	65,675,820 13	10,429,779 97*	18 .9
1923	67,147,088 47	1,471,268 34	2 .2

[fol. 4154] Consolidated Gas Company of New York

Population of Manhattan Island (Territory of Consolidated Gas Company)

Year	Population
1880	1,164,673
1890	1,441,216
1895	1,742,985
1900	1,854,190
1905	2,116,260
1910	2,330,524
1911	2,325,638
1912	2,320,752
1913	2,315,866
1914	2,310,980
1915	2,306,094
1916	2,301,208
1917	2,296,322
1918	2,291,436
1919	2,286,550
1920	2,281,664
1921	2,276,778
1922	2,271,892
1923	2,267,006

*Includes $10,010,630.72 of property purchased from the New York Mutual Gas Ligth Co., as of August 31, 1922.

[fol. 4155] Consolidated Gas Company of New York

Number of Employees

Year	Offices	Shops	Stations	Street depts.	Other depts.	Total
1907	Details not available					2,665
1908	"	"	"			2,327
1909	"	"	"			2,557
1910	"	"	"			2,790
1911	"	"	"			3,084
1912	"	"	"			3,293
1913	891	887	674	642	169	3,263
1914	887	806	590	647	462	3,392
1915	928	790	385	437	490	3,030
1916	918	757	555	382	485	3,097
1917	1,072	545	431	340	516	2,904
1918	1,244	484	483	291	667	3,169
1919	1,254	675	529	269	539	3,266
1920	1,345	654	465	302	641	3,407
1921	1,284	646	448	348	752	3,478
1922	1,434	1,020	616	334	855	4,259
1923	1,469	733	613	464	875	4,152

[fol. 4156] Consolidated Gas Company of New York

Financial History of Company as to Outstanding Capital Stock and Obligations (Exclusive of Current Liabilities)

Year	Capital stock	Other obligations
(Nov. 11)		
1884	$35,430,060 00	$1,636,000 00
1885	39,078,000 00	1,619,000 00
1886	39,078,000 00	1,600,000 00
1887	39,078,000 00	2,300,000 00
1888	39,078,000 00	2,868,000 00
1889	39,078,000 00	3,145,000 00
1890	39,078,000 00	3,058,000 00
1891	39,078,000 00	3,362,000 00
1892	39,078,000 00	3,308,000 00
1893	39,078,000 00	4,024,000 00
1894	39,078,000 00	4,088,000 00
1895	39,078,000 00	3,748,000 00
1896	39,078,000 00	3,658,000 00

Year	Capital stock	Other obligations
1897	39,078,000 00	2,408,000 00
1898	39,078,000 00	2,105,000 00
1899	39,078,000 00	3,651,000 00
1900	71,621,800 00	3,718,990 00
1901	72,890,600 00	10,424,410 56
1902	72,917,758 94	10,914,420 56
1903	80,000,000 00	2,625,500 00
1904	80,000,000 00	22,152,100 00
1905	80,000,000 00	21,245,100 00
1906	80,000,000 00	24,045,100 00
1907	80,001,000 00	30,044,100 00
1908	99,454,500 00	14,139,100 00
1909	99,784,000 00	8,809,600 00
1910	99,816,500 00	8,777,100 00
1911	99,816,500 00	8,745,100 00
1912	99,816,500 00	8,738,100 00
1913	99,816,500 00	16,738,025 00
1914	99,816,500 00	13,236,525 00
1915	99,816,500 00	24,846,647 50
1916	99,816,500 00	24,846,772 50
1917	99,816,500 00	24,846,772 50
1918	100,253,000 00	25,110,272 50
1919	100,384,500 00	27,628,772 50
1920	100,384,500 00	56,450,500 00
1921	100,384,500 00	47,400,500 00
1922	147,094,050 00	28,234,575 00
1923	191,964,825 96	3,440,300 00

[fol. 4157] Consolidated Gas Company of New York

Financial History of Company

Rate of Dividends Paid Upon Common Stock

Year	Rate of dividends
1885	7%
1886	3%
1887	4%
1888	4%
1889	5%
1890	5%

Year	Rate of dividends
1891	5%
1892	6%
1893	7½%
1894	8%
1895	8%
1896	8%
1897	8%
1898	8%
1899	5½%
1900	6%
1901	8%
1902	8%
1903	8%
1904	8½%
1905	8½%
1906	5%
1907	4%
1908	4%
1909	4%
1910	4½%
1911	6%
1912	6%
1913	6%
1914	6%
1915	6¾%
1916	7%
1917	7%
1918	7%
1919	7%
1920	7%
1921	7%
1922	7½%
1923	$5.00 per share (of no par value).

NOTE.—The dividend history of the company is stated, but it can be given only negative consideration in this connection, as the earnings of the Company include income from sources other than the gas business, e. g., dividends, interest, etc. received on stock and bonds of electric and gas companies, of which the Consolidated Gas Company owns stock control.

[fol. 4158] Consolidated Gas Company of New York

Actual Cost of New Business (Annual Gas Sales) since 1909 (When Mr. Addicks Assumed Active Relationship to This Work)

Year	Gas sales		Promotion expense (new business), amount	Utilization department	Total promotion expense & utilization dept., amount
	Cubic feet	Increase			
1909	15,298,837,100	.....	.....	.....	$152,726 96
1910	16,044,272,700	745,435,600	$152,726 96	.....	178,924 24
1911	16,175,163,200	130,890,500	178,924 24	.....	190,044 41
1912	16,641,107,600	465,944,400	190,044 41	$20,022 23	202,718 42
1913	16,553,735,700	87,371,900†	182,696 19	36,637 38	209,538 22
1914	16,508,900,700	44,835,000†	172,900 84	38,390 89	208,149 50
1915	15,679,825,300	829,075,400†	169,758 61	36,613 89	183,606 11
1916	16,295,126,600	615,301,300	146,992 22	38,634 70	257,740 59
1917	16,891,064,100	595,937,500	219,105 89	35,861 95	211,822 25
1918	18,029,245,000	1,138,180,900	175,960 30	38,895 74	231,582 21
1919	18,576,440,300	547,195,300	192,686 47	41,353 55	270,076 03
1920	20,753,111,600	2,176,671,300	228,722 48	54,133 69	263,632 42
1921	19,396,607,100	1,356,504,500†	209,498 73	48,290 60	310,254 26
1922*	19,931,447,000	534,839,900	261,963 66	53,908 48	323,345 94
1923*	22,025,580,400	2,094,134,400	269,437 46		
Total Increase and Cost		6,726,744,300	$2,751,418 46	$442,743 10	$3,194,161 56

Cost per M Cu. Ft. of New Business (14 Year Period)		$ .4090	$ .0658	$ .4748
Increase & Cost (Last 10 Years)	5,471,845,700	$2,047,026.66	$422,720.87	$2,469,747.53
Cost per M Cu. Ft. of New Business (Last 10 Years)		$ .3741	$ .0773	$ .4514

*Volume of sales acquired from N. Y. Mutual Gas Light Co. not included because promotion expense and utilization expense of N. Y. Mutual Co. up to that time are not included.

[†Red in copy.]

[fol. 4159] Consolidated Gas Company of New York

Actual Cost of New Business (Meters in Active Service) Since 1909 (When Mr. Addicks Assumed Active Relationship to This Work)

Year	Active meters		Promotion expense (new business), amount	Utilization department	Total promotion exp. & utilization dept., amount
	Number	Increase			
1909	446,306				$152,726 96
1910	469,571	23,265	$152,726 96		178,924 24
1911	477,049	7,478	178,924 24		190,044 41
1912	483,727	6,678	190,044 41	$20,022 23	202,718 42
1913	486,676	2,949	182,696 19	36,637 38	209,538 22
1914	486,958	282	172,900 84	38,390 69	208,149 50
1915	489,275	2,317	169,758 61	36,613 89	183,606 11
1916	497,470	8,195	146,992 22	38,634 70	257,740 59
1917	502,566	5,096	219,105 89	35,861 95	211,822 25
1918	501,120	1,446†	175,960 30	38,895 74	231,582 21
1919	504,891	3,771	192,686 47	41,353 55	270,076 03
1920	517,209	12,318	228,722 48	54,133 69	263,632 42
1921	514,811	2,398†	209,498 73	48,290 60	310,254 26
1922	511,066*	3,745†	261,963 66	53,908 48	323,345 94
1923	515,278*	4,212	269,437 46		
Total Increase and Cost		68,972	$2,751,418 46	$442,743 10	$3,194,161 56

Cost of New Business per New Meter	.....	$39 89	$6 42	$46 31
Increase & Cost (Last 10 Yrs.)	28,602	$2,047,026 66	$422,720 87	$2,469,747 53
Cost of New Business per New Meter (Last 10 Years)	.....	$71 57	$14 78	$86 35

*Number of Active Meters acquired from N. Y. Mutual Gas Light Company not included because promotion expense and utilization expense of N. Y. Mutual Gas Light Company up to that time are not included.

[†Red in copy.]

[fol. 4160] Consolidated Gas Company of New York

Volume and Growth of Appliance Rentals and Sales and of the Utilization of Gas

Year	Number of appliances rented	Revenue therefrom	Number of appliances sold	Gross profits therefrom
1909	110,546	$268,293 07	17,836	$5,132 56
1910	146,288	324,468 53	20,475	11,378 00
1911	171,738	387,926 20	25,132	13,475 88
1912	190,520	425,082 05	32,527	12,700 84
1913	211,687	477,030 10	20,725	23,008 14
1914	218,327	521,806 64	25,514	20,114 81
1915	225,627	579,461 41	37,101	30,769 80
1916	232,031	617,303 67	44,004	61,375 93
1917	241,217	687,903 05	52,832	143,031 56
1918	246,365	963,511 21	60,763	214,517 38
1919	257,413	1,047,582 79	90,516	210,105 31
1920	270,589	1,189,525 51	91,190	439,335 41
1921	267,156	1,412,184 30	86,857	221,756 82
1922	281,739	1,513,820 89	147,857	296,714 29
1923	283,117	1,499,311 77	180,541	350,133 90

[fol. 4161] Consolidated Gas Company of New York

Actual Direct Labor and Material Costs of Setting Meters During the Year 1923

Labor (including handling)	$39,030 90
Material	18,093 18
Cartage	2,304 55
Superintendence and Supplies and Expenses	12,533 76
Total	$71,962 39
Number of Meters Set	17,408
Average cost per meter Set	$4 13

[fol. 4162] Consolidated Gas Company of New York

Actual Direct Labor and Material Costs of Setting Gas Appliances During the Year 1923

Labor of Setting	$170,097.46
Material	93,341.58
Cartage	60,281.48
Handling	34,687.60
Superintendence and Supplies and Expenses	75,449.88
Total	$433,858.00
Number of Appliances Set	86,724
Average cost per appliance Set	$5.00

[fol. 4163] Consolidated Gas Company of New York

Financial History as to Cost of Superseded Property

Year	Total cost of property retired	M cu. ft. of gas sales	Retirement expense per M cu. ft. of gas sold
1885	$29,049.50	3,942,434	$.0074
1886	31,687.05	4,192,691	.0076
1887	153,037.63	4,844,514	.0316
1888	39,944.04	5,382,147	.0074
1889	72,606.19	5,615,509	.0129
1890	134,844.16	5,904,343	.0228
1891	351,862.97	6,269,804	.0561
1892	321,211.75	6,581,954	.0488
1893	186,533.64	6,854,014	.0272
1894	125,606.88	6,731,325	.0187
1895	152,768.39	6,736,461	.0227
1896	256,029.09	6,837,571	.0374
1897	166,719.73	6,790,864	.0246
1898	453,905.62	7,306,829	.0621
1899	242,272.41	8,615,523	.0281
1900	330,837.90	9,898,001	.0334
1901	462,527.82	10,296,955	.0449
1902	458,480.80	11,494,838	.0399
1903	237,576.96	12,766,545	.0186

Year	Total cost of property retired	M cu. ft. of gas sales	Retirement expense per M cu. ft. of gas sold
1904	456,335 79	13,170,760	.0346
1905	282,219 67	13,283,164	.0212
1906	200,517 06	13,879,728	.0144
1907	395,869 56	14,752,231	.0268
1908	455,246 77	14,381,174	.0317
1909	364,028 05	15,298,837	.0238
1910	556,525 35	16,044,273	.0347
1911	489,437 81	16,175,163	.0303
1912	646,528 82	16,641,108	.0389
1913	776,138 48	16,553,736	.0469
1914	1,338,582 14	16,508,901	.0811
1915	881,840 36	15,679,825	.0562
1916	554,585 02	16,295,127	.0340
1917	358,679 29	16,891,064	.0212
1918	601,450 69	18,029,245	.0334
1919	462,580 64	18,576,440	.0249
1920	784,848 33	20,753,112	.0378
1921	259,848 41	19,396,607	.0134
1922	1,100,845 34	20,580,286	.0535
1923	1,278,466 70	24,057,694	.0531
Total	$16,452,076.82	474,010,797	$.0347

[fol. 4164] Consolidated Gas Company of New York

Normal Working Capacity of Manufacturing Plants and Variation Between Maximum and Minimum Day's Send Out in Each Year

Year	Capacity (M cubic feet)	Maximum day's send out (M cubic feet)	Minimum day's send out (M cubic feet)
1899	46,000	39,669	15,643
1900	46,000	40,944	17,380
1901	46,000	38,108	14,220
1902	46,000	36,030	16,491
1903	46,000	39,930	16,832
1904	42,500	39,718	12,966
1905	42,500	41,369	14,973
1906	71,000	41,409	16,634

PLAINTIFF'S EXHIBIT NO. 899

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENTS SHOWING THE DETAIL OF STATION COSTS OF MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE NEW AMSTERDAM AND STANDARD GAS COMPANIES DURING THE YEAR 1923.

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE QUANTITIES AND COST OF MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE NEW AMSTERDAM GAS COMPANY DURING THE CALENDAR YEAR 1923.

GAS PURCHASED DURING THE MONTHS OF FEBRUARY, MARCH, JUNE, SEPTEMBER & OCTOBER.

	Quantity	Quantity Per M. Cu. Ft. Made	Unit Prices	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	3,535.46 gr. tons	25.2008 lbs.	$10.7041 per gr. ton	$ 37,843.86	$ .1204
Coke	2,400,072 lbs.	7.6374 "	.4410 " C. lbs.	10,583.91	.0337
Boiler Fuel - Coal	540.18 gr. tons	3.8504 "	10.6975 " gr. ton	5,778.59	.0184
Coke	15,332 lbs.	.0488 "	.4599 " C. lbs.	70.51	.0002
Water Gas Tar	193,790 gals.	.6167 gals.	.0478 " gal.	9,263.14	.0295
Labor, Cartage, etc. Handling				2,216.47	.0070
Total Water Gas Fuel				65,756.48	.2092
Gas Oil	1,134,947 gals.	3.6116 gals.	.0552 per gal.	62,664.00	.1994
Water	506,424 cu.ft.	1.6115 cu.ft.	1.00 " M.c.f.	506.41	.0016
Iron Mass	640 bus.	.0020 bus.	.2351 " bu.	150.49	.0005
Shavings	987 bus.	.0031 bus.	.0266 " bu.	26.35	.0001
Sundry Supplies				255.66	.0009
Labor, Cartage, etc. Handling Spent Material				345.55	.0011
Total Material				129,714.94	.4128
Deduct - Residuals					
Water Gas Tar Produced	195,027 gals.	.6206 gals.	.0478 per gal.	9,325.45	.0297
Drip Oil Produced	1,361 gals.	.0043 gals.	.0600 " gal.	81.63	.0002
Total Residuals				9,407.08	.0299
Residual Expense				203.71	.0006
Net Credit from Residuals				9,203.37	.0293
Net Materials				120,511.57	.3835
Gas Making Labor				10,572.60	.0336
Electric Current				499.53	.0016
Total Material & Labor				131,583.70	.4187
Repairs				12,252.48	.0390
Miscel. Works Expense				1,653.06	.0053
Gas Storage				1,448.34	.0046
T o t a l				$ 146,937.58	$.4676

Gas Purchased cubic feet 314,253,400

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE QUANTITIES AND COST OF MATERIAL AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE STANDARD GAS LIGHT COMPANY DURING THE CALENDAR YEAR 1923.

GAS PURCHASED DURING THE MONTHS OF APRIL, MAY, JUNE AND OCTOBER.

	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	718.51 gr. tons	18.3537 lbs.	$10.6680 per gr ton	$ 7,665.07	$ .0874
Coke	1,177,818 lbs.	13.4814 "	.4449 " C. lbs.	5,239.55	.0597
Boiler Fuel - Coal	124.76 gr. tons	3.1869 "	10.6655 " gr. ton	1,330.63	.0152
Coke	159,195 lbs.	1.8154 "	.4150 " C. lbs.	660.60	.0075
Water Gas Tar	51,147 gals.	.5833 gals.	.0478 " gal.	2,444.82	.0279
Labor, Cartage etc. Handling				384.19	.0044
Total Water Gas Fuel				17,724.86	.2021
Gas Oil	305,986 gals.	3.4894 gals.	.0553 per gal.	16,929.75	.1930
Water	95,719 cu.ft.	1.0915 cu.ft.	1.00 " M.c.f.	95.72	.0011
Shavings	300 bus.	.0034 bus.	.0581 " bu.	17.42	.0002
Sundry Supplies				10.62	.0001
Labor, Cartage etc. Handling				365.81	.0042
Spent Material					
Total Material				35,144.18	.4007
Deduct - Residuals					
Water Gas Tar Produced	64,732 gals.	.7382 gals.	.0480 per gal.	3,108.16	.0355
Drip Oil Produced	1,519 "	.0173 "	.0600 " "	91.12	.0010
Total Residuals				3,199.28	.0365
Residual Expense				58.91	.0007
Net Credit from Residuals				3,140.37	.0358
Net Materials				32,003.81	.3649
Gas Making Labor				3,366.40	.0384
Total Material and Labor				35,370.21	.4033
Repairs				3,630.66	.0414
Miscellaneous Works Expense				1,299.37	.0148
Gas Storage				1,690.78	.0193
T o t a l				41,991.02	.4788

Gas Purchased-cubic feet 87,691,400 cubic feet

PLAINTIFF'S EXHIBIT NO. 900

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENTS SHOWING THE DETAIL OF STATION COSTS OF MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE NEW AMSTERDAM, STANDARD, AND NEW YORK MUTUAL GAS COMPANIES DURING THE YEAR 1922.

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE QUANTITIES AND COST OF MATERIAL AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE NEW AMSTERDAM GAS COMPANY DURING THE CALENDAR YEAR 1922.

GAS PURCHASED DURING THE MONTHS OF FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY, AUGUST AND SEPTEMBER

	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	4,676.65 gr. tons	16.9074 lbs.	$10.7382 per gr. ton	$ 50,218.66	$ .0811
Coke	9,735,587 lbs.	15.7129 "	.3966 per C. lbs.	38,613.28	.0623
Water Gas Tar	2,609 "	.0042 "	.0521 " lb.	136.11	.0002
Boiler Fuel - Coal	1,065.99 gr. tons	3.8539 "	10.6384 " gr. ton	11,340.43	.0183
Coke	280,419 lbs.	.4526 "	.3894 " C. lbs.	1,091.90	.0018
Water Gas Tar	376,320 gals.	.6074 gals.	.0478 " gal.	17,988.12	.0290
Labor, Cartage etc. Handling				4,550.67	.0073
Total Water Gas Fuel				123,939.17	.2000
Gas Oil	2,430,976 gals.	3.9235 gals.	.0560 per gal.	136,160.89	.2198
Water	1,120,576 cu.ft.	1.8086 cu.ft.	1.00 " M.c.f.	1,120.58	.0018
Iron Mass	1,028 lbs.	.0017 lbs.	.2363 " lb.	241.20	.0004
Shavings	3,448 lbs.	.0056 lbs.	.0267 " "	91.99	.0001
Sundry Supplies				808.64	.0013
Labor, Cartage, etc. Handling, Spent Material				1,280.53	.0021
Total Material				265,643.00	.4286
Deduct-Residuals					
Water Gas Tar Produced	433,567 gals.	.4981 gals.	.0478 per gal.	20,690.11	.0334
Drip Oil Produced	12,784 "	.0206 "	.1129 " "	1,430.53	.0023
Total Residuals				22,120.64	.0357
Residual Expense				216.89	.0004
Net Credit from Residuals				21,903.75	.0353
Net Materials				241,739.25	.3902
Gas Making Labor				24,588.99	.0397
Electric Current				916.04	.0014
Total Material & Labor				267,244.32	.4313
Repairs				23,681.23	.0382
Miscel. Works Expense				1,388.62	.0022
Gas Storage				3,639.19	.0059
T o t a l				$ 296,920.56	$ .4776

Gas Purchased - cubic feet 619,891,400

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE QUANTITIES AND COST OF MATERIAL AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE STANDARD GAS LIGHT COMPANY DURING THE CALENDAR YEAR 1922.

GAS PURCHASED DURING THE MONTHS OF JANUARY, FEBRUARY, APRIL, MAY & JUNE

	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	186.89 gr. tons	5.6492 lbs.	$ 11.2678 per gr. ton	$ 2,106.96	$ .0294
Coke	1,794,415 lbs.	25.0583 "	.4003 " C. lbs.	7,182.68	.1003
Boiler Fuel- Coal	6.96 gr. tons	.2165 "	11.2679 " gr. ton	78.65	.0011
Coke	11,325 lbs.	.1581 "	.4160 " C. lbs.	47.11	.0007
Water Gas Tar	59,878 gals.	.8362 gals.	.0476 " gal.	2,862.24	.0400
Labor, Cartage etc. Handling				189.04	.0026
Total Water Gas Fuel				12,466.68	.1741
Gas Oil	297,526 gals.	4.1548 gals.	.0582 per gal.	17,317.58	.2418
Water	65,835 cu.ft.	1.1987 cu.ft.	1.00 " M.c.f.	65.84	.0012
Iron Mass	512 bus.	.0071 bus.	.2152 " bu.	110.17	.0015
Shavings	222 bus.	.0031 "	.0832 " "	18.48	.0003
Labor, Cartage, etc. Handling Spent Material				291.15	.0041
Total Material				30,290.07	.4230
Deduct - Residuals					
Water Gas Tar Produced	65,107 gals.	.9092 gals.	.0478 per gal.	3,115.23	.0436
Drip Oil Produced	2,296 "	.0321 "	.0895 " "	205.38	.0029
Total Residuals				3,320.61	.0464
Residual Expense				40.07	.0006
Net Credit from Residuals				3,280.54	.0458
Net Materials				27,009.53	.3772
Gas Making Labor				2,544.86	.0368
Total Material and Labor				29,554.39	.4127
Repairs				1,917.82	.0268
Miscellaneous Works Expense				687.76	.0096
Gas Storage				1,297.82	.0181
T o t a l				$ 33,457.51	$ .4672

Gas Purchased - cubic feet 71,609,500

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE QUANTITIES AND COST OF MATERIAL AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE NEW YORK MUTUAL GAS LIGHT COMPANY DURING THE EIGHT MONTHS ENDED AUGUST 31ST, 1922.

GAS PURCHASED DURING EACH MONTH OF THE PERIOD FROM JANUARY TO AUGUST INCLUSIVE

	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	4,747.25 gr. tons	19.7537 lbs.	$10.6560 per gr. ton	$ 50,586.74	$ .0940
Coke	4,933,829 lbs.	9.1652 "	.4146 " C. lbs.	20,454.06	.0380
Water Gas Tar	822,582 "	1.5281 "	.0054 " lb.	4,447.28	.0083
Boiler Fuel - Coal	700.46 gr. tons	2.9147 "	10.6584 " gr. ton	7,466.76	.0139
Coke	2,672,056 lbs.	4.9637 "	.2665 " C. lbs.	7,122.00	.0132
Water Gas Tar	251,447 gals.	0.4671 gals.	.0478 " gal.	12,019.12	.0223
Labor, Cartage etc. Handling				6,101.14	.0113
Total Water Gas Fuel				108,196.10	.2010
Gas Oil	2,229,149 gals.	4.1409 gals.	.0580 per gal.	129,359.12	.2403
Water	934,881 cu.ft.	1.7367 cu.ft.	1.00 " M.c.f.	934.89	.0017
Iron Mass	9,823 bus.	0.0182 bus.	.2470 " bu.	2,426.52	.0045
Shavings	5,261 bus.	0.0098 bus.	.0457 " "	240.24	.0005
Labor, Cartage etc. Handling Spent Material				1,506.45	.0028
Total Material				242,663.32	.4508
Deduct - Residuals					
Water Gas Tar Produced	421,327 gals.	0.7827 gals.	.0474 per gal.	19,967.94	.0371
Drip Oil Produced	11,419 "	0.0212 "	.0525 " "	599.49	.0011
Total Residuals				20,567.43	.0382
Residual Expense				15.31	-
Net Credit from Residuals				20,572.12	.0382
Net Materials				222,091.20	.4126
Gas Making Labor				15,951.95	.0296
Total Material & Labor				238,043.15	.4422
Repairs				22,675.95	.0421
Miscel. Works Expense				9,424.93	.0175
Gas Storage				2,701.74	.0050
T o t a l				$ 272,845.77	$ .5068
Gas Purchased-cubic feet	538,320,900				

B.

Year	Capacity (M cubic feet)	Maximum day's send out (M cubic feet)	Minimum day's send out (M cubic feet)
1907	71,000	40,135	23,324
1908	71,000	48,879	18,805
1909	71,000	52,518	25,451
1910	71,000	55,844	22,014
1911	71,000	50,992	23,799
1912	71,000	56,828	27,637
1913	101,000	62,871	31,617
1914	92,500	65,626	29,908
1915	92,500	62,767	28,967
1916	92,500	61,346	23,650
1917	92,500	76,638	24,666
1918	92,500	79,900	22,966
1919	93,500	85,623	25,012
1920	93,500	87,055	31,647
1921	111,500	98,163	28,642
1922	129,500	106,011	30,637
1923	153,500	130,280	37,164

NOTE.—The above figures include as to the years 1906 to 1923 inclusive the combined capacity and send-out of the plants of the Consolidated and Astoria Companies.

(Here follow Plaintiff's Exhibits Nos. 899 and 900 marked side folio pages 4165, 4166, 4167, 4168, 4169, 4170, and 4171)

[fol. 4172] PLAINTIFF'S EXHIBIT NO. 975.

August 9, 1922.

From: Mr. Vanneman, Chief Engineer,
To: The Commission.
Re Case No. 680.

I submit herewith a report on the application of the New York Mutual Gas Light Company in respect to sale of their property to the Consolidated Gas Company. In connection with this report, particular attention is directed

to the statements under paragraph B with reference to amortization and with the accounts now kept by this company therein enumerated. With respect to the last sentence on page 2, it should be clearly borne in mind that the property of this company is one of the best maintained properties in the city of New York and that there is a grave question as to the application of the straight line theory in this instance.

(Signed) C. R. Vanneman, Chief Engineer.

[fol. 4173] State of New York Public Service Commission
New York Office, 30 Church Street

New York, Aug. 4, 1922.

Mr. C. R. Vanneman, Chief Engineer, Public Service Commission, Albany, New York.

Case 680

Dear Sir: In accordance with your request contained in letter under date of July 13, 1922, I have had a spot check made of the inventory dated October 1, 1919 and priced as of January 1, 1914, submitted by the New York Mutual Gas Light Company in connection with their present petition dated May 16, 1922. These valuation figures are the same as those submitted in evidence before the United States District Court (Southern District of New York) in an action brought by the Company to declare confiscatory the statutory rate for gas. I have likewise had a general examination made of the Company's books and a corresponding field check of the items of physical property represented by capital expenditures made during the period October 1, 1919 to February 28, 1922, inclusive.

Based upon the general examination conducted, I am of the opinion that the figures shown in company's petition covering appraisal of property dated October 1, 1919, capital additions October 1, 1919 to February 28, 1922, material and supplies on hand as of February 28, 1922, and gas in holders, mains and services and furnished to consumers but not yet billed as of February 28, 1922, represent fair and reasonable figures as a basis of purchase, subject, however, to a consideration of the following elements

necessarily pertinent to a complete disposition so far as the engineering features are involved in this particular case:

A. Items appearing as capital additions, but included in appraisal figures dated October 1, 1919. There are certain charges included in capital additions made during the period October 1, 1919 to February 28, 1922 which pertain to property installed prior to October 1, 1919 and, therefore, reflected in appraisal figures found by United States District Court (Southern District of New York). The items referred to cover charges pertaining to engineering and superintendence and purification apparatus. These matters have been taken up with Mr. R. A. Carter of the company, and I am informed that adjustments will be made and included in figures to be submitted to the Commission when the agreed price is determined upon, in conformity with the contract of pur- [fol. 4174] chase, which requires that the basic agreed price of $9,012,275.37 shall be subject to such changes as occur in the assets and liabilities between February 28, 1922 and the date determined by the committee for the taking over of the property, which date, I am informed by Mr. R. A. Carter, will occur shortly after the granting of consent by the Commission. These are minor items when considering the total amount involved and will, in all probabilities, result in the deduction of an amount, which, in my opinion, will not exceed approximately $30,000.

B. Operating condition and accrued amortization of property. A general field inspection has been made of the items of physical property of this company. My investigation shows that this property is maintained in first class operating condition and further, I believe, that the dissolution and transfer of ownership of the properties of this company to the Consolidated Gas Company will not interfere in any manner with the quality and dependability of the service rendered consumers. Due to the lack of an adequate engineering force to conduct the necessary detailed examination, I am unable to prepare schedules showing the accrued amortization (straight line method) existant in this company's property due to the elapsed

life of the various items of physical property now in service. However, I desire to call your attention to certain amortization provisions shown on the company's books. The New York Mutual Gas Light Company in 1915, under resolution passed by the executive committee and approved by the Board of Directors, transferred the balance in P. S. C. Account "Accrued Amortization of Capital" to the Company's account "Contingency," $1,022,374.95. The balance in the account "Contingency" was $1,342,499.76 as of December 31, 1921. Of this amount, $1,126,952.16 represents appropriations charged to operating expenses. The company substituted in 1915 their account "Renewals and Replacements—Plant Withdrawn from Service" for the P. S. C. Account "Accrued Amortization of Capital." The balance in this account was as of December 31, 1921, $102,601.90. Summarizing the amounts therefore properly construable as representing amortization reserves which have been recovered from operations are as follows:

Renewals and Replacements	$102,601 90
Contingency	1,126,952 16
Total	$1,229,554 06

An examination of the Company's books shows that over sixty per cent of the present fixed capital assets as of Dec. 31, 1921 exclusive of land, however, represents property acquired prior to December 31, 1908. Based on this fact and my previous experience in computing accrued amortization for gas properties, I am of the opinion that if detailed studies could have been made, the results would have shown an amount exceeding the amount in the re- [fol. 4175] serves ($1,229,554.06) which represents moneys charged to operations and reflected in the assets shown in the company's present petition.

I believe it is questionable whether as between buyer and seller, the Commission has jurisdiction in the matter of the purchase price to be paid. However, the Commission is vitally interested in the value of this property for future capitalization purposes. This petition is rather unique in that it provides for payment in cash and that there has been no concurrent application on behalf of the purchasing company for issuance of securities at this time,

although it is natural to presume that an application of this kind will be made upon the completion of the legal steps necessarily involved in transferring the property.

Based upon the previous facts and opinions herein stated,

It is recommended that

1. Valuation figures submitted in company's petition representing an inventory as of October 1, 1919, and priced as of January 1, 1914 (amounting to $9,669,480) be accepted subject to whatever weight and consideration, if any, the Commission believes should be given in a purchase case of this kind to the fact that the records of this company show that there is a reserve balance of $1,229,554.06, which represents charges included in operating expenses and reflected in assets included in the present petition.

2. Figures showing net capital additions to company's books for period October 1, 1919, to February 28, 1922, (amounting to $360,364.15) be accepted, subject, however, to minor adjustments to be made by company when final balance sheet is prepared.

3. Figures for Material and Supplies (amounting to $299,654.78) be accepted.

4. Figures showing gas in holders, mains in services and furnished to consumers, but not yet billed as of February 28, 1922 (amounting to $63,471.25) be accepted.

It is further recommended that copies of this report be referred to the legal and accounting departments of the Commission in connection with the legal and accounting phases involved in this petition.

Transmitted herewith attached is a schedule arranged by property account showing the valuation found by the Federal District Court (Southern District of New York) [fol. 4176] based upon company's inventory as of October 1, 1919, with prices as of January 1, 1914, except for land (market value of land January 1, 1919) and also net capital additions October 1, 1919, to February 28, 1922, as shown by company's books.

Very truly yours, (Signed) Randolph H. Nexsen,
Deputy Chief Engineer.

Schedule attached.

[fol. 4177] PUBLIC SERVICE COMMISSION, STATE OF NEW YORK

Case No. 680

In the Matter of the Application of THE NEW YORK MUTUAL GAS LIGHT COMPANY for Consent to the Purchase by the Consolidated Gas Company of New York of the Works, Distribution System, and Certain Other Property of the New York Mutual Gas Light Company

Valuation Figures Found by the U. S. District Court for the Southern District of New York (in Action Brought by Company to Declare Confiscatory the Statutory Rate for Gas) Based upon Company's Inventory as of October 1, 1919, with Prices as of January 1, 1914, Except for Land and Including Net Capital Additions as per Company's Books for Period October 1, 1919, to February 28, 1922

	Valuation found by Federal District Court based upon company's inventory as of October 1, 1919, with prices as of January 1, 1919, except for land	Net additions 10/1/19 to 2/28/22 as per company's books	Total valuation figures including additions as per co.'s books 10/1/19 to 2/28/22
Market value of Land 1/1/19	$1,479,700	$8,030 67	$1,487,730 67
Water gas manufacturing plant (Other than land & buildings)	2,094,229	110,150 95	2,204,379 95
Buildings & appurtenances	456,934	85,838 89	542,772 89

Mains	2,040,428	14,235 40	2,054,663 40
Services	168,927	Cr. 8,648 96	460,278 04
Meters, cocks, etc.	350,303	34,962 91	385,265 91
Stoves, etc.	140,098	99,913 23	246,312 23
Lamps	6,301		
Tools and implements	11,931	741 11	12,672 11
Stable equipment, automobiles, etc.	12,831	1,393 63	33,153 63
Office furniture and fixtures	18,929		
Net material and labor cost	$7,080,611	$346,617 83	$7,427,228 83
Undistributed Construction Expenditures:			
Omissions and contingencies	104,711		104,711 00
Engineering and superintendence	610,519	13,746 32	624,265 32
Interest during construction	745,064		745,064 00
Taxes during construction	59,087		59,087 00
Administration, legal & misc. gen. exp. during construction	132,671		132,671 00
Total Undistrib. Constr. Exp.	$1,652,052	$13,746 32	$1,665,798 32

Valuation Figures—Continued

	Valuation found by Federal District Court based upon company's inventory as of October 1, 1919, with prices as of January 1, 1919, except for land	Net additions 10/1/19 to 2/28/22 as per company's books	Total valuation figures including additions as per co.'s books 10/1/19 to 2/28/22
Intangibles:			
Organization & development prior to construction	457,203	.....	457,203 00
Cost of financing	479,614	.....	479,614 00
Total Intangibles	$936,817	.....	$936,817 00
Total Reproduction Cost incl. Undistributed Construction Expenditures & Intangibles	$9,669,480	$360,364 15	$10,029,844 15

Eng. Dept., New York Office, Aug. 3, 1922.

[fol. 4178] PLAINTIFF'S EXHIBIT No. 976

Case No. 680

In the Matter of the Petition of THE NEW YORK MUTUAL GAS LIGHT COMPANY for Consent to the Transfer of the Works and System of Its Gas Plant to Consolidated Gas Company of New York (Which Joins in the Petition)

August 14, 1922.

Memorandum for the Commission

On May 18, 1922 the New York Mutual Gas Light Company filed a petition with the Commission asking for the consent to the transfer of the works and system of its gas plant to the Consolidated Gas Company of New York under section 70 of the Public Service Commission Law.

The petition and supporting papers in this case were submitted to the Commission's Engineering Division and that Division, under date of August 9, 1922, rendered a report, a copy of which is attached to the original memorandum and order in this case.

In connection with the progress of this case Judge Hale of the Commission brought up several questions which were submitted to the Company for answer. Under date of July 18, 1922 a letter was received from Mr. Geo. B. Cortelyou, President of the Consolidated Gas Company of New York, in which the specific questions raised by Judge Hale were answered in full. The Company, through its Counsel, Whitman, Ottinger and Ransom, upon receipt of a copy of the report of the Commission's Engineering Division made a reply thereto in a letter, dated August 14, 1922. The original letters heretofore referred to as received from [fol. 4179] Mr. Geo. B. Cortelyon and from the firm of Whitman, Ottinger & Ransom are likewise attached to the original copy of memorandum and order in this case to be used by the Commission for its information.

Mr. Vanneman, the Commission's Chief Engineer, and Mr. Nexon, Deputy Chief Engineer, have both stated to me in connection with their report that for the purpose of sale and purchase the property of the New York Mutual Gas Light Company as of February 28, 1922 is worth at least

$9,012,275.37, the amount which the Consolidated Gas Company of New York has requested the authority of the Commission to pay the New York Mutual Gas Light Company for the same.

In view of the foregoing, an order has been drawn and is herewith submitted to the Commission for its approval, wherein consent of the Commission is given that the New York Mutual Gas Light Company may transfer its works and system as set forth in its petition to the Consolidated Gas Company of New York and permits and approves the transfer to the Consolidated Gas Company of New York of the works and system now owned by the New York Mutual Gas Light Company as of February 28, 1922 for the sum of $9,012,275.37.

Respectfully submitted.

(Signed) Walter J. Fitzpatrick, Deputy Chief Accounting Division.

(Here follow Plaintiff's Exhibits Nos. 1017, 1018, 1019, 1020, 1021, 1022, 1025, 1026, 1027, marked side folio pages 4180, 4181, 4182, 4183, 4184, 4185, 4186, 4187, 4188, 4189, 4190, 4191, 4192, 4193, 4194, 4195, 4196, 4197, 4198, 4199, and 4200.)

PLAINTIFF'S EXHIBIT NO 1017

PLAINTIFF'S EXHIBIT NO. 888
WITH CURRENT PRICES, ETC.

CONSOLIDATED GAS COMPANY OF NEW YORK

ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS BASED UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, CYANOGEN, AMMONIA, AMMONIA SULPHATE AND CARBON AND UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923.

(INCLUDING COST OF MATERIALS, LABOR, GENERAL EXPENSES, INSURANCE, MAINTENANCE, TAXES, ETC. PAID IN COST OF GAS PURCHASED; AND PAYMENTS MADE FOR THE USE OF THE PROPERTY OWNED BY OTHER GAS COMPANIES AND DEVOTED TO THE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS.)

Note - The figures herein relate to the cost of the quality of gas actually supplied during the year 1923, viz. an average of about 593 B.T.U. per cubic foot. If gas of not less than 650 B.T.U. had been supplied during 1923, the costs stated herein would have increased at least 4.79 cents per thousand cubic feet of gas made or 5.02 cents per thousand cubic feet of gas sold.

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923, INCLUDING MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF COAL GAS PURCHASED FROM THE ASTORIA LIGHT, HEAT AND POWER COMPANY, AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, AMMONIA, AMMONIA SULPHATE, CYANOGEN AND CARBON.

QUANTITIES AND COST OF MATERIALS AND LABOR - COAL GAS MANUFACTURE

Cost of Production - Coal Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Caking Coal	398,172.54 gr. tons	197.3472 lbs.	$6.3925 per gr. ton	$2,545,317.96	$ .6632
Handling				122,725.49	.0271
Total Caking Coal				2,668,043.45	.6903
Residuals					
Coke	398,172.54 chalds.	0.0881 chald.	5.5269 per chald.	2,200,658.83	.4869
Coal Tar	4,722,452 gals.	1.0449 gals.	.0490 " gal.	231,400.15	.0512
Ammoniacal Liquor	143,116 lbs.	0.0317 lbs.	.0097 " lb.	1,386.19	.0003
Cyanogen	576,009 "	0.1106 "	.1200 " "	64,330.68	.0143
Ammonia	136,923 "	0.0303 "	.1000 " "	13,692.30	.0030
" Sulphate	5,581,927 "	1.2284 "	.0261 " "	146,016.33	.0321
Carbon	61,244 "	0.0136 "	.0085 " "	520.87	.0001
Ammonium Concentrate	117,132 gals.	0.0259 gals.	.1200 " gal.	14,056.65	.0031
Total Residuals				2,671,060.70	.5910
Deduct Residual Expense				266,697.60	.0590
Net Credit from Residuals				2,404,363.10	.5320
Net Cost of Coal Carb'd.				263,680.36	.0583
Bench Fuel - Coke	90,050,877 lbs.	21.6952 lbs.	.3747 per G. lbs.	367,441.62	.0813
Boiler " Coal	764.40 gr. tons	0.3769 "	8.3776 " gr. ton	6,566.49	.0015
" " Coke	16,711,610 lbs.	4.1402 "	.3424 " G. lbs.	64,071.39	.0142
" " Water Gas Tar	1,176,967 gals.	0.2609 gals.	.0478 " gal.	56,354.56	.0125
Labor, Cartage etc. Handling				2,469.11	.0005
Total Coal Gas Fuel				496,893.37	.1100
Gas Oil	691,455 gals.	0.1530 gals.	.0038 per gal.	37,165.71	.0082
Water	20,378,754 cu.ft.	4.5091 cu.ft.	1.00 " M. c.ft.	20,378.75	.0045
Iron Mass	113,048 bus.	0.0250 bus.	.2391 " bu.	27,034.82	.0060
Sundry Supplies				8,200.54	.0018
Labor, Cartage etc. Handling Spent Materials				4,025.84	.0009
Total Materials				857,579.38	.1897
Residuals - Water Gas Tar	134,284 gals.	0.0275 gals.	.0467 per gal.	5,609.49	.0013
Drip Oil	4,163 "	0.0009 "	.0568 " "	234.26	.0001
Total Residuals				6,045.75	.0014
Net Materials				851,533.63	.1883
Gas Making Labor				370,577.51	.0820
Elec. Power House Operating				81,380.46	.0180
Total Materials & Labor				1,303,283.89	.2883
Repairs				533,231.13	.1176
Miscellaneous Works Expense				122,366.62	.0271
Total Cost of Coal Gas				1,957,880.84	.4332

Gas Made - Cubic Feet 4,519,479,800

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923, INCLUDING MATERIALS AND LABOR EMPLOYED IN THE MANUFACTURE OF WATER GAS PURCHASED FROM THE ASTORIA LIGHT, HEAT AND POWER COMPANY, THE NEW AMSTERDAM GAS COMPANY AND THE STANDARD GAS LIGHT COMPANY, AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE AND GAS OIL.

QUANTITIES AND COSTS OF MATERIALS & LABOR - WATER GAS MANUFACTURE

Cost of Production - Water Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	122,609.96 gr. tons	13.2601 lbs.	$10.6909 per gr. ton	$1,310,810.62	$ .0633
" " Coke	484,072,512 lbs.	30.4021 "	.3332 " C. lbs.	1,677,587.75	.0810
Boiler Fuel - Coal	20,376.94 gr. tons	2.2045 "	10.3550 " gr. ton	210,992.09	.0102
" " Coke	82,926,643 lbs.	4.0052 "	.3113 " C. lbs.	258,114.59	.0125
" " Water Gas Tar	9,721,967 gals.	.4696 gals.	0.0478 " gal.	464,986.78	.0225
Labor, Cartage etc. Handling				182,821.49	.0088
Total Water Gas Fuel				4,105,253.52	.1983
Gas Oil	77,203,902 gals.	3.7288 gals.	0.0538 per gal.	4,151,164.25	.2006
Water	43,181,030 cu.ft.	2.0856 cu.ft.	1.00 " M. c.f.	43,181.03	.0021
Iron Mass	192,694 bus.	.0096 bus.	0.2268 " bu.	45,221.96	.0022
Shavings	76,417 "	.0036 "	0.0414 " "	3,080.76	.0001
Sundry Supplies				19,492.74	.0009
Labor, Cartage etc. Handling Spent Material				57,996.96	.0028
Total Materials				8,425,393.22	.4069
Residuals - Water Gas Tar	14,255,794 gals.	.6885 gals.	0.0476 per gal.	677,534.26	.0327
Drip Oil	578,730 "	.0289 "	0.0604 " "	34,941.80	.0017
Total Residuals				712,476.06	.0344
Deduct Residual Expense				8,325.19	.0004
Net Credit from Residuals				704,150.87	.0340
Net Materials				7,721,242.35	.3729
Gas Making Labor				680,167.33	.0329
Elect. Power House Operating				43,631.94	.0021
Total Materials & Labor				8,445,041.62	.4079
Repairs				751,678.75	.0363
Miscel. Works Expense				218,122.48	.0105
Total Cost of Water Gas				$9,414,842.85	$.4547

Gas Made - Cubic Feet 20,704,495,700

B.

CONSOLIDATED GAS COMPANY OF N.Y.

STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS BASED UPON THE VOLUME OF BUSINESS AND QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923, AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, AMMONIA, AMMONIA SULPHATE, CYANOGEN AND CARBON.

- COMBINED COAL AND WATER GAS MANUFACTURE -

	Cubic Feet	Amount	Cost per M. Cubic Feet
Total Cost of Coal Gas - Brought Forward	4,519,479,800	$1,957,860.34	$ .4332
" " " Water " " "	20,704,496,700	9,414,862.85	.4547
T o t a l	25,223,976,500	11,372,723.19	.4509
Gas Storage		273,875.85 ✓	
Repairs - 14th and 42nd Streets		9,574.36 ✓	
Total Cost of Production	25,223,976,500	$11,656,173.40	$.4621

GAS ACCOUNT - CUBIC FEET

Gas on Hand January 1, 1923	52,866,000	
Gas Made	25,223,976,500	
T o t a l	25,276,841,500	
Deduct Gas on Hand Dec. 31, 1923	57,286,000	
Net Total to be accounted for	25,219,555,500	
Gas Sales to Consumers	24,057,694,200	
" Used by Company	75,447,600	
Unaccounted for due to Condensation etc.	1,086,213,700	- 4.31%
	25,219,355,500	
Ratio of Sales to Make	95.30%	

B

CONSOLIDATED GAS COMPANY OF NEW YORK

STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923 AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, AMMONIA, AMMONIA SULPHATE, CYANOGEN AND CARBON.

(All sums paid as Return upon Investment in property of Other Companies used for Consolidated Gas Company has been eliminated from this statement of cost viz., a total of $8,221,840.25)

		Amount	Cost per M. Cu.Ft. Sold
Cost of Production, Brought Forward (Gas Sales cu.ft. 24,057,694,200)		$11,686,173.40	$ .4845
Cost of Distribution and Other Expenses			
Distribution, Superintendence, Supplies and Expenses		609,138.81	.0253
Meter and Installation Work		496,615.90	.0207
Work on Consumers' Premises		626,588.92	.0260
Gas Supply Inspection		100,101.05 ✓	.0042
Repairs on Street Mains (Consol. Gas Co.)	$187,263.39		
Add Amount paid to East River Gas Co.	37,980.38		
" " " " Standard Gas Light Co.	1,117.13	226,331.10	.0094
Repairs on Services		159,168.27	.0066
" " Meters		541,026.56	.0225
" " Tools		42,709.84	.0018
" " Gas Appliances		252,046.59	.0105
" " Buildings		30,139.75	.0013
" " Street Lamps		1,317.18	.0001
Commercial Expenses		1,671,811.72	.0695
Salaries - General Office (Consol. Gas Co.)	508,642.11		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	28,802.96	537,445.07	.0223
Supplies and Expenses, General Office (Consol. Gas Co.)	301,154.11		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	14,323.69	315,477.80	.0131
General Law Expense (Consol. Gas Co.)	49,679.10		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	13,137.79	62,816.89	.0026
Claims and Arrears Expense		27,632.06	.0011
Claims for Damages (Consol. Gas Co.)	6,204.57		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	18,025.09	24,229.66	.0010
Insurance (Consol. Gas Co.)	158,540.42		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	44,059.82		
" " " " East River Gas Co.	9,487.89		
" " " " Standard Gas Light Co.	413.10	212,506.93	.0088
Vacation and Sickness (Consol. Gas Co.)	143,974.06		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	6,743.80	150,717.34	.0063
Contributions to Employees Aid Society (Consol. Gas Co.)	85,165.82		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	29,772.20	114,938.02	.0048
Superannuation (Consol. Gas Co.)	158,968.18		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	1,052.04	160,020.22	.0067
Stable and Automobile Expense		288,613.11	.0120
Miscellaneous General Expense (Consol. Gas Co.)	176,061.06		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	18,237.56	194,298.62	.0081
Undistributed Adjustments (Consol. Gas Co.)	134,658.60 X		
Less Amount paid to Astoria Lt. Ht. & Pr. Co.	12,156.96	122,501.64 X	.0051 X
Duplicate Gas Charges (Consol. Gas Co.)	84,122.70 X		
Add Credit from Astoria Lt. Ht. & Pr. Co.	11,245.64 X	95,368.34 X	.0040 X
Uncollectible Bills		110,734.41	.0046
Interest on Consumers' Deposits		94,032.42 ✓	.0039 ✓
Expense in re Gas Rate Appeal #3		86,458.06 ✓	.0036 ✓
" " " P.S.C. Hearings		113.56 ✓	- ✓
Repairs Insurance, etc. re: property rented to Others		547.77	-
Total Cost of Distribution and Other Expenses		6,921,709.56	.2877
Retirement Expense (Consol. Gas Co.)	842,019.30		
Add Amount paid to Astoria Lt. Ht. & Pr. Co.	44,059.83 ✓		
" " " " East River Gas Co.	9,487.60 ✓		
" " " " Standard Gas Light Co.	413.10 ✓	895,979.83	.0373
Taxes Paid directly by Consol. Gas Co. 1762866.29	1,834,309.33 ✓		
Add Taxes paid by Consol. to Astoria Lt. Ht. & Pr. Co.	550,482.21		
" " " " " " East River Gas Co.	94,875.96	2412691.38	.1002
" " " " " " Standard Gas Light Co.	4,472.82	2,474,040.42	.1028
Interest on Unpaid Taxes		115,042.57 ✓	.0048
Total Cost of Production, Distribution, etc. (on basis above indicated, exclusive of any return upon property or investment)		21605555.07 22,062,948.78	.9171
Deduct Miscellaneous Operating Revenue			
Gross Profit from Sales of Gas Appliances	360,133.90		
Rent of Gas Appliances	1,547,152.89		
Interest on Bank Balances	58,636.76 ✓		
Rental of Jointly Used Facilities (Excl. 6% Return on Invest.)	64,469.87	V 1398993 ✓	
Miscellaneous Rent Revenue	78,122.96	2,098,516.06	.0872
Net Cost of Production and Distribution of All Gas Sold by Consolidated Gas Co. (exclusive of any return upon property or investment)		19,964,427.72	$ .8299 .8131

Note - The foregoing figures relate to the cost as of May 1st, 1924 of the quality of Gas actually supplied during the year 1923, viz., an average about 595 B.T.U. per cubic foot. If gas of not less than 650 B.T.U. had been supplied during 1923, the above-stated costs would have been increased at least 4.7% per thousand cubic feet of gas made or 5.02% per thousand cubic feet of gas sold.

RATE REQUIRED FOR 6% RETURN ON INVESTMENT IN ALL PROPERTY USED IN THE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS (SCHEDULE "A")

19565495.95 .8131

Net Cost of all gas sold by Consol. Gas Co. to its Consumers, as above	5490294.83	$ 19,964,427.72	$ .8299
Return on Investment at 6% per annum b		7,657,936.25	.3183 .2947
Add for Federal Income Tax at 12½%	1,093,991.18	249935.73	.112
Less Federal Income Tax included above in the item of Net Cost	395,905.12	690,066.06	.0290
Total Amount and "Flat" rate required to yield 6% b return on investment		28,320,452.03	1.1772

RATE REQUIRED FOR 6% RETURN ON PRESENT REPLACEMENT COST OF ALL PROPERTY USED IN SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS (SCHEDULE "B")

Net Cost of all gas sold by Consol. Gas Co. to its Consumers, as above		19,964,427.72	.8299
Return on present Replacement Cost at 6% per annum		14,776,680.52	.6142
Add for Federal Income Tax at 12½%	2,110,982.93		
Less Federal Income Tax included above in the item of Net Cost	395,905.12	1,715,077.81	.0713
Total Amount and "Flat" Rate required to yield 6% return on Present Replacement Cost		$36,456,366.05	$1.5154

X Denotes Red in Copy

SCHEDULE "A"

INVESTMENT AS OF DECEMBER 31, 1925, IN ALL PROPERTY USED IN SERVICE OF CONSOLIDATED GAS COMPANY CONSIDERED (EXH. #831)

Property owned by the Consolidated Gas Company and devoted to its own Gas Business (Exhibits 831 and 838)	$87,849,810.97
Portion of Property owned by the Astoria Light Heat & Power Co. and used by the Consolidated Gas Co. (Exhibit #831)	23,892,222.83
Portion of property owned by the East River Gas Co. of L.I.C. and the Standard Gas Light Co. used by the Consolidated Gas Co. (portion of Tunnels and Connecting Mains) (Exhibits 766 and 831)	3,906,751.29
Portion of property owned by the Standard Gas Light Co. and used by the Consolidated Gas Company (portion of 42nd Street Governor and Boiler House and Land) (Exhibits 766 and 831)	75,443.04
Total per Exhibit #831	$ 95,724,228.13
Return on Investment at 8% per annum ($95,724,228.13 x 8%) =	$ 7,657,938.25
Federal Income Tax at 12½% ($7,657,938.25 ÷ 87½% = $8,751,929.43 x 12½%) =	1,093,991.18
Investment December 31, 1925 per thousand cubic feet of gas sold ($95,724,228.13 ÷ 24,067,694,200 cubic feet) =	$ 3.9769
Return on Investment at 8% per annum, per thousand cubic feet of gas sold ($3.9769 x 8%) =	$ 0.3182

B.

SCHEDULE "B"

REPLACEMENT COST AS OF DECEMBER 31, 1923 OF ALL PROPERTY USED IN THE SERVICE OF CONSOLIDATED GAS COMPANY CONSUMERS.

Replacement Cost as of June 1, 1923 of property owned by the Consolidated Gas Co. and used in the Gas Business June 1, 1923 (per Exhibits 856, 873, 873x and Schedule "X" of Exhibit 890)	$147,464,251.00	
Less property of the Consolidated Gas Co. used by Affiliated Companies (Exhibits 871, 873, 873x and Schedule "X" of Exhibit 890)	3,790,053.17	
Balance - property owned by Consolidated Gas Co. and used in its Gas Business June 1, 1923 (Exhibits, 873, 873x and Schedule "X" of Exhibit 890)	143,644,197.83	
Deduct - Replacement Cost of the Net Excess of withdrawals over additions made to Fixed Capital between June 1, and December 31, 1923 (per Exh. 8887)	6,522,080.53	
Property owned by Consolidated Gas Company and used in its Gas Business December 31, 1923		$137,122,112.30
Add - Replacement Cost as of June 1, 1923 of Property of Affiliated Gas Cos. devoted to use of Consolidated Gas Co. Consumers, Dec. 31, 1923		
Portion of the property of the Astoria Lt. Ht. & Pr. Co. used by Consolidated Gas Co. June 1, 1923 (per Exhibits 868, 868x, 873, 873x and Schedule "X" of Exhibit 890)	37,530,909.82	
Portion of the Replacement Cost of Net Additions made between June 1 and December 31, 1923 (per Exhibit 886)	88,466.73	37,619,376.55
(a) Portion of the Property of the East River Gas Co. of L.I. City 12/31/23 (Exhibits 868, 873, 873x and Schedule "X" of Exhibit 890)		
Astoria and Ravenswood Tunnels	8,742,182.64	
48" and 60" Mains on Long Island	839,208.32	9,581,394.96
(a) Portion of the Property of the Standard Gas Lt. Co. 12/31/23 (Exhibits 868, 873, 873x and Schedule "X" of Exhibit 890)		
48" Barlow River Main	245,209.03	
62nd Street Governor and Boiler House and Land	121,413.67	367,622.70
Total Replacement Cost as of June 1, 1923 of all property used in the service of Consolidated Gas Co. Consumers December 31, 1923		$184,711,006.81

(a) The replacement Cost as of June 1, 1923 of that portion of the properties of the East River and Standard Gas Companies devoted to use of Consol. Gas Co. Consumers Dec. 31, 1923, were the same as they were on June 1, 1923. Practically no additions to or withdrawals from these properties were made between June 1, and December 31, 1923

Return on Investment at 8% per annum ($184,711,006.81 x 8%) =	$ 14,776,880.52
Federal Income Tax at 12½% ($14,776,880.52 ÷ 87½% = $16,887,863.45 x 12½%) =	$ 2,110,982.93
Replacement Cost December 31, 1923 per thousand cu.ft. of gas sold ($184,711,006.81 ÷ 24,027,696,200 cu.ft.) =	$ 7.6778
Return on Replacement Cost at 8% per annum per thousand cubic feet of gas sold ($7.6778 x 8%) =	$ 0.6142

STATEN GAS COMPANIES

ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS BASED UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, CYANOGEN, AMMONIA, AMMONIA SULPHATE AND CARBON AND UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31st, 1923

Note - The figures herein relate to the cost of the quality of gas actually supplied during the year 1923.

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES, BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923 AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, CYANOGEN, AMMONIA, AMMONIA SULPHATE AND CARBON.

QUANTITIES OF MATERIALS AND LABOR - COAL GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

Cost of Production - Coal Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu. Ft. Made
Caking Coal	553,577.15 gr. tons	197.0902 lbs.	$6.3467 per gr. ton	$3,513,896.45	$.5584
Handling				157,047.97	.0251
Total Caking Coal				3,670,944.40	.5835
Residuals					
Coke	550,705.69 chalds.	.0875 chald.	5.5470 per chald.	3,054,768.45	.4855
Coal Tar	6,592,640 gals.	1.0478 gals.	.0490 " gal.	323,039.36	.0514
Ammoniacal Liquor	178,284 lbs.	.0283 lbs.	.0098 " lb.	1,750.50	.0003
Cyanogen	713,894 "	.1135 "	.1200 " "	85,667.28	.0136
Ammonia	182,676 "	.0290 "	.1000 " "	18,267.60	.0029
Ammonia Sulphate	7,719,196 "	1.2269 "	.0261 " "	201,625.40	.0321
Carbon	107,300 "	.0171 "	.0085 " "	912.05	.0001
Ammonium Concentrate	143,856 gals.	.0228 gals.	.1200 " gal.	17,202.72	.0027
Total Residuals				3,703,233.36	.5886
Deduct - Residual Expense				354,983.44	.0564
Net Credit from Residuals				3,348,249.92	.5322
Net Cost of Coal Carb'd.				322,694.48	.0513
Bench Fuel - Coke	130,597,745 lbs.	20.7575 lbs.	.3767 per C. lbs.	491,923.18	.0782
Boiler " Coal	978.82 gr. tons	.3464 "	8.7411 " gr. ton	8,553.38	.0013
" " Coke	30,469,938 lbs.	4.8430 "	.3055 " C. lbs.	93,074.48	.0148
" " Water Gas Tar	1,791,496 gals.	.2847 gals.	.0478 " gal.	85,633.49	.0136
Labor, Cartage etc. Handling				6,147.57	.0010
Total Coal Gas Fuel				685,332.10	.1089
Gas Oil	820,139 gals.	.1304 gals.	.0538 per gal.	44,082.47	.0070
Water	27,126,860 cu.ft.	4.3116 cu.ft.	1.00 " M. cu.ft.	27,126.86	.0043
Iron Mass	149,111 bus.	.0237 bus.	.2429 " bu.	36,214.91	.0058
Sundry Supplies				11,210.99	.0018
Labor, Cartage etc. Handling Spent Material				8,255.03	.0013
Total Materials				1,134,916.84	.1804
Residuals - Water Gas Tar	147,549 gals.	.0234 gals.	.0468 per gal.	6,892.39	.0011
Drip Oil	4,833 "	.0008 "	.0563 " "	272.16	-
Total Residuals				7,164.55	.0011
Net Materials				1,127,752.29	.1793
Gas Making Labor				534,259.46	.0849
Elec. Power House Operating				95,177.81	.0151
Total Materials & Labor				1,757,189.06	.2793
Repairs - Labor				378,097.45	.0593
Material				382,917.84	.0608
Miscel. Works Expense				165,484.43	.0260
Total (Excl. Gas Storage)				$ 2,676,688.78	$.4254

Gas Made - cubic feet 6,291,601,000

E.

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES, BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923 AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE AND GAS OIL.

QUANTITIES OF MATERIALS AND LABOR - WATER GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

Cost of Production - Water Gas	Quantity	Quantity Per M. Cu. Ft. Made	Unit Price	Amount	Cost per M. Cu.Ft. Made
Generator Fuel - Coal	198,608.69 gr. tons	13.4969 lbs.	$10.6909 per gr. ton	$2,123,305.64	$ .0644
" " Coke	661,264,922 lbs.	20.0614 "	.3932 " C. lbs.	2,600,210.42	.0789
Boiler Fuel - Coal	33,189.74 gr. tons	2.2555 "	10.4608 " gr. ton	347,192.06	.0105
" " Coke	125,837,656 lbs.	3.8177 "	.3113 " C. lbs.	391,678.58	.0119
" " Water Gas Tar	16,154,985 gals.	.4901 gals	.0478 " gal.	772,485.13	.0234
Handling - Generator Fuel				246,894.18	.0075
" Boiler "				48,317.84	.0015
Total Water Gas Fuel				6,530,083.66	.1981
Gas Oil	122,096,282 gals.	3.7042 gals.	.0538 " gal.	6,564,975.45	.1992
Water	66,702,113 cu.ft.	2.0236 cu.ft.	1.00 " M. cu.ft.	66,702.11	.0020
Iron Mass	293,632 lbs.	.0089 lbs.	.2472 " lb.	72,639.45	.0022
Sundry Supplies				35,327.27	.0011
Labor, Cartage etc. Handling Spent Material				86,361.65	.0026
Total Materials				13,356,089.59	.4052
Residuals - Water Gas Tar	22,218,998 gals.	.6741 gals.	.0476 per gal.	1,057,172.68	.0321
Drip Oil	940,309 "	.0285 "	.0603 " "	56,682.71	.0017
Total Residuals				1,113,855.39	.0338
Deduct Residual Expense				12,798.55	.0004
Net Credit from Residuals				1,101,056.84	.0334
Net Materials				12,255,032.75	.3718
Gas Making Labor				977,789.53	.0297
Electric Power House Operating				60,347.58	.0018
Total Materials & Labor				13,293,169.86	.4033
Repairs - Labor				710,610.65	.0216
" Material				532,094.25	.0161
Miscel. Works Expense				442,461.69	.0134
Total (Excl. Gas Storage)				$ 14,978,336.45	$ .4544

Gas Made - Cubic Feet 32,962,012,000

B.

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES, BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923 AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, OVEN COKE, GAS OIL, COAL TAR, AMMONIA, AMMONIA SULPHATE, CYANOGEN AND CARBON.

COMBINED COAL AND WATER GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

	Cubic Feet	Amount	Cost per M. Cubic Feet
Coal Gas Made (Excl. Gas Storage) Brought Forward	6,291,601,000	$ 2,676,688.78	$ .4254
Water " " " " " " "	32,962,012,000	14,978,336.45	.4544
Total Station Cost (Excl. Gas Storage)	39,253,613,000	17,655,025.23	.4498
Gas Storage at Works and Distributing Stations		395,840.81	.0101
Total Cost of Production Coal & Water Gas	39,253,613,000	18,050,866.04	.4599
Less, Gas Transferred by No. Union Gas Co. to the Westchester Ltg. Co. and the Bronx Gas & Elect. Company	6,412,400	2,949.06	.4599
Net Cost of Production Coal and Water Gas	39,247,200,600	$ 18,047,916.98	$ .4599

GAS ACCOUNT - CUBIC FEET

Gas on Hand - January 1, 1923	106,574,000	
Gas Made - Coal Gas	6,291,601,000	
Water "	32,962,012,000	
Total	39,360,187,000	
Less Gas on Hand -December 31, 1923	102,645,000	
Total Send Out	39,257,542,000	
Less Gas Transferred by No. Union Gas Co.		
To Westchester Lighting Co.	2,574,000	
Bronx Gas & Electric Co.	3,838,400	
Total Transferred to Other Cos.	6,412,400	
Net Total to be accounted for	39,251,129,600	
Sold to Consumers	37,324,773,700	
Used by the Companies	107,008,000	
Unaccounted for due to Condensation etc.	1,819,347,900	- 4.64%
Total	39,251,129,600	
Ratio of Sales to Make	95.10%	

SYSTEM GAS COMPANIES

COMBINED COST STATEMENT SHOWING THE ANNUAL COST OF PRODUCTION AND DISTRIBUTION OF GAS OF THE CONSOLIDATED, ASTORIA, NEW AMSTERDAM, EAST RIVER, CENTRAL UNION, NORTHERN UNION AND STANDARD GAS COMPANIES, BASED UPON THE VOLUME OF BUSINESS AND THE QUANTITIES OF MATERIALS USED DURING THE TWELVE MONTHS ENDED DECEMBER 31, 1923 AND UPON PRICES PREVAILING AS OF MAY 1, 1924 FOR COAL, COKE, GAS OIL, COAL TAR, AMMONIA, AMMONIA SULPHATE, CYANOGEN AND CARBON.

COMBINED COAL AND WATER GAS MANUFACTURE
(EXCLUDING ALL INTER COMPANY CHARGES)

			Amount	Per M.Cu. Ft. Sold
Cost of Production - Brought Forward (Gas Sales cu.ft. 37,324,773,700)			$18,047,916.98	$ .4835
Distribution and Other Expenses				
Distribution, Superintendence, Supplies and Expenses			968,622.90	.0265
Meter and Installation Work			913,406.86	.0245
Work on Consumers' Premises			974,521.41	.0261
Gas Supply Inspection			197,241.83	.0053
Repairs on Street Mains and Tunnels			366,291.93	.0098
Services			266,588.91	.0071
Meters			819,286.90	.0220
Buildings			67,682.75	.0018
Tools			60,554.75	.0016
Gas Appliances			362,722.75	.0097
Public Street Lighting			1,317.18	.0000
Commercial Expenses			2,743,271.72	.0735
Salaries - General Office			694,584.31	.0186
Supplies and Expenses, General Office			365,651.12	.0098
Legal Expense			118,956.93	.0031
Claims and Arrears Expense			43,469.28	.0012
Insurance			352,081.46	.0094
Vacation and Sickness			223,699.15	.0060
Contributions to Employees Aid Society			168,215.84	.0045
Superannuation			183,600.28	.0049
Stable Expense			68,224.15	.0018
Claims for Damages			43,642.25	.0012
Undistributed Adjustments			144,699.61	.0039
Duplicate Gas Charges			120,272.48	.0032
Uncollectible Bills			185,072.11	.0050
Interest on Consumers' Deposits			139,697.10	.0038
Rate Case Expense			137,423.72	.0037
Automobile Expense			336,997.74	.0090
Miscellaneous General Expense			304,528.56	.0082
Total Distribution and Other Expenses			10,839,151.83	.2904
Retirement Expense			1,328,989.39	.0356
Taxes (Includes Federal Income Tax of $1,099,639.04 and 2.95¢ per M. cu.ft. sold)			4,885,245.50	.1309
Interest on Unpaid Taxes			225,116.96	.0060
Total Cost of Gas Sold			35,326,420.66	.9464
Deduct Miscellaneous Operating Revenue		$2,604,907.01		
Gas Appliance Rents		561,089.19		
Gross Profit from Sale of Appliances		98,160.56		
Interest on Bank Balances etc.				
Miscellaneous Rent Revenue	$144,876.08			
G.O. Building	194,225.86	339,101.94		
Miscellaneous Rents			3,603,258.70	.0965
Net Cost after giving effect to Miscel. Operating Revenue			$ 31,723,161.96	$.8499

Note - The foregoing figures relate to the cost as of May 1st, 1924 of the Quality of gas actually supplied during the year 1923.

RATE REQUIRED FOR 6% RETURN ON INVESTMENT USED IN THE SERVICE OF THE SYSTEM GAS COMPANIES CONSUMERS
(SCHEDULE "A")

		Amount	Per M. Cu. Ft. Sold
Net Cost of all gas sold by the System Companies to their consumers		$31,723,161.96	$.8499
Return on Investment at 6% per annum		12,936,199.05	.3466
Add, Federal Income Tax at 12½%	$1,654,681.81		
Less Federal Income Tax included above in the item of Net Cost	1,099,639.04	555,042.77	.0149
Total Amount and "Flat" rate required to yield 6% Return on Investment		$45,214,403.78	$1.2114

RATE REQUIRED FOR 6% RETURN ON PRESENT REPLACEMENT COST (TO THE EXTENT INDICATED) OF ALL PROPERTY USED IN THE SERVICE OF SYSTEM GAS COMPANIES' CONSUMERS
(SCHEDULE "B")

		Amount	Per M. Cu. Ft. Sold
Net Cost of all gas sold by the System Companies to their consumers		$31,723,161.96	$.8499
Return on Replacement Cost at 6% per annum		20,272,830.84	.5431
Add Federal Income Tax at 12½%	$2,702,972.02		
Less Federal Income Tax included above in the item of Net Cost	1,099,639.04	1,603,332.98	.0430
Total Amount and "Flat" rate required to yield 6% Return on Replacement Cost		$53,599,325.78	$1.4360

SCHEDULE "A"

SYSTEM GAS COMPANIES

INVESTMENT IN ALL PROPERTY USED IN THE GAS BUSINESS DECEMBER 31, 1923.

Consolidated Gas Company of New York		
Investment Owned and used in its Gas Business (per plaintiffs' Exh. 826 submitted in the present case)	$ 67,849,810.97	
Property owned by Consolidated Gas Co. but used by its Affiliated Gas Companies (per Exh. 826)	1,783,239.25	
Portion of General Office Property devoted to use of Other Companies (Exhibit 824)	1,940,489.30	$ 71,573,539.52
Astoria Light Heat and Power Company		
Per Plaintiffs' Exhibits Nos. 829 and 830		29,837,522.56
New Amsterdam Gas Co.,(Incl. E.R. Gas Co. of L.I. City)		(a) 27,311,777.54
Central Union Gas Company		(a) 11,603,963.22
Northern Union Gas Company		(a) 6,722,967.72
Standard Gas Light Company		(a) 14,652,717.61
Total Investment December 31, 1923		$161,702,488.17

(a) Based upon the Investment June 30, 1922 found by the Public Service Commission per Opinion and Order dated August 30, 1922 its Cases Nos. 79 and 106, plus Net Additions to Fixed Capital at actual cost to December 31, 1923

Return on Investment at 8% per annum ($161,702,488.17 x 8%) =	$12,936,199.05
Federal Income Tax at 12½% on the excess of Return on Investment over Fixed Charges ($12,936,199.05 - $1,352,026.37 = $11,584,172.68 ÷ 87½% = $13,239,054.49 x 12½%) =	$ 1,654,881.81
Investment December 31, 1923 per thousand cubic feet of gas sold ($161,702,488.17 ÷ 37,324,773,700 cubic feet) =	$ 4.33231
Return on Investment at 8% per annum per thousand cubic feet of gas sold ($4.33231 x 8%) =	$ 0.3466

SCHEDULE "B"

SYSTEM GAS COMPANIES

PROPERTY USED IN THE GAS BUSINESS DECEMBER 31, 1923.

Including Property of the Consolidated and Astoria Companies on basis of Replacement Cost, as indicated by Exhibits in the present case and Property of other System Gas Companies on the basis of Investment, June 30th, 1922 found the Public Service Commission plus Net Additions to Fixed Capital at actual Cost to December 31, 1923.

Consolidated Gas Company of New York		
Replacement Cost (per Exhibits 856 and 857)		$140,912,165.47
Adn. Replacement Cost of General Office Building devoted to use of other Companies 61.08% of $8,439,907.89 -		5,215,863.07
T o t a l		146,128,028.54
Astoria Light Heat and Power Company		
Replacement Cost (Exhibits 866x, 868x and 886)		46,990,927.07
New Amsterdam Gas Co. (Incl. East River Gas Co. of L.I. City)	(a)	27,311,777.54
Central Union Gas Company	(a)	11,603,963.22
Northern Union Gas Company	(a)	6,722,967.72
Standard Gas Light Company	(a)	14,682,717.61
Total Investment December 31, 1923		$ 253,410,381.70

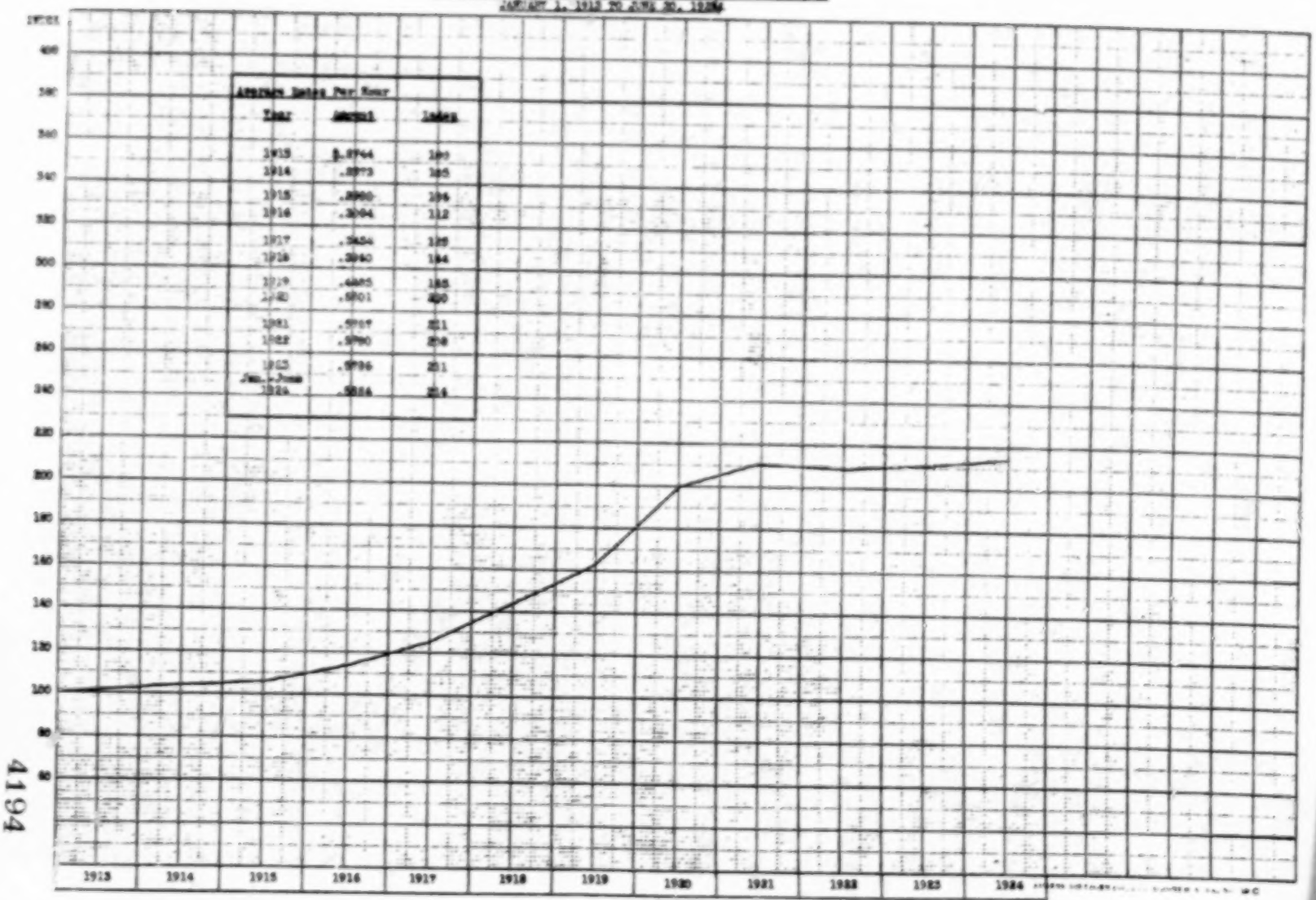
(a) Based upon the investment, June 30, 1922 found by the Public Service Commission, per Opinion and Order dated August 30, 1922 its case Nos. 79 and 108 plus Net Additions to Fixed Capital at actual cost to December 31, 1923

Return on Investment at 8% per annum ($253,410,381.70 x 8%) =	$ 20,272,830.54
Federal Income Tax at 12½% on the excess of Return on Investment over Fixed Charges ($20,272,830.54 - $1,352,026.37 = $18,920,804.17 ÷ 87½% = $21,625,776.19 x 12½%) =	2,702,972.02
Replacement Cost Dec.31,1923 per thousand cubic feet of gas sold ($253,410,381.70 ÷ 37,324,773,700 cubic feet) =	$ 6.78933
Return on Investment at 8% per annum per thousand cubic feet of gas sold ($6.78933 x 8%) =	$ 0.5431

4193

PLAINTIFF'S EXHIBIT NO. 1019

CONSOLIDATED GAS COMPANY OF NEW YORK
AVERAGE ANNUAL RATES OF PAY FOR ALL MECHANICAL DEPARTMENTS
JANUARY 1, 1913 TO JUNE 30, 1924



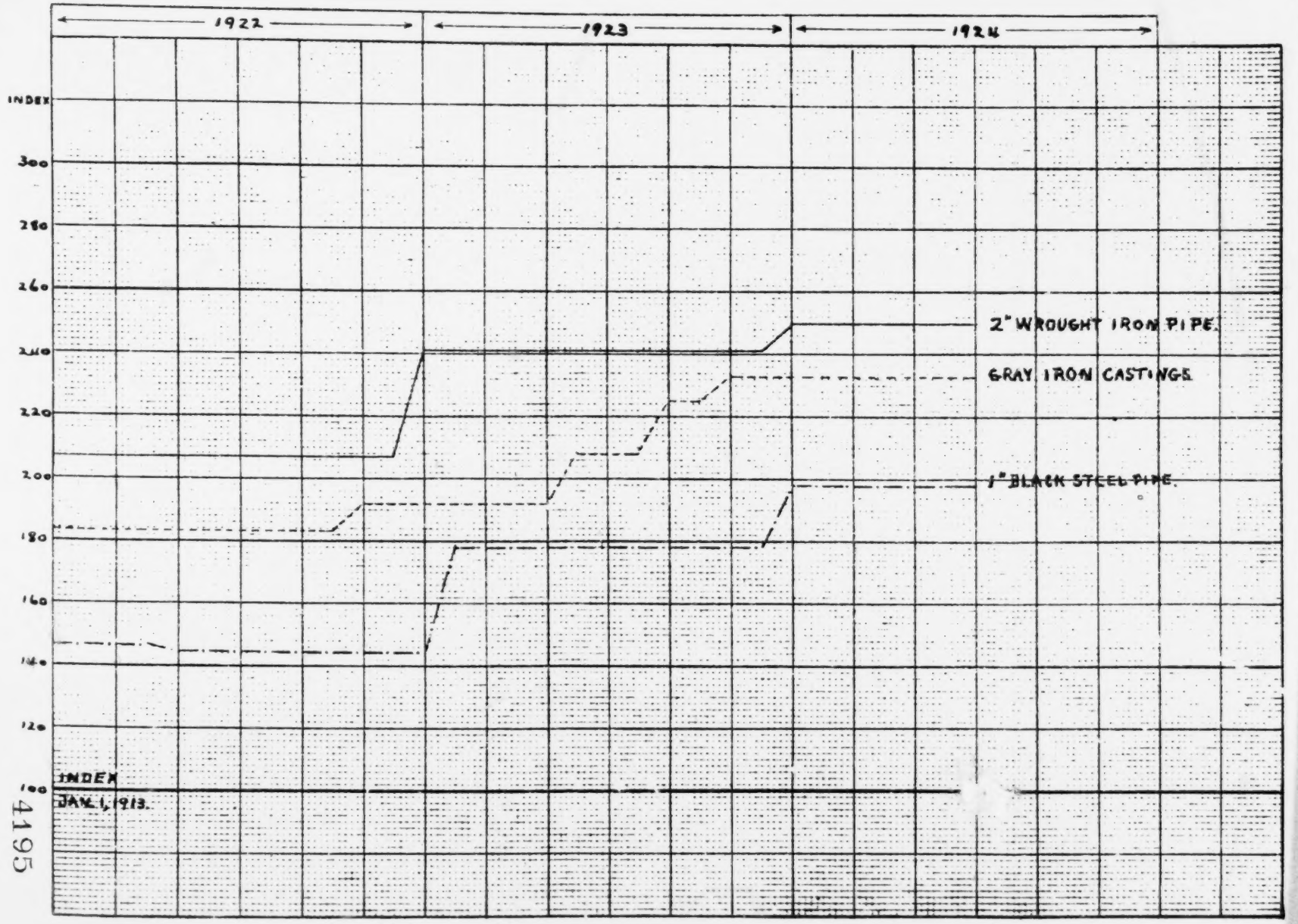
PLAINTIFF'S EXHIBIT NO. 1020

CONSOLIDATED GAS COMPANY OF NEW YORK

INDEX OF ACTUAL PRICES PAID

DURING THE PERIOD FROM JANUARY 1, 1922 TO JUNE 30, 1924

FOR 2" WROUGHT IRON PIPE (MILL PRICE), 1" BLACK STEEL PIPE (MILL PRICE) AND GRAY IRON CASTINGS



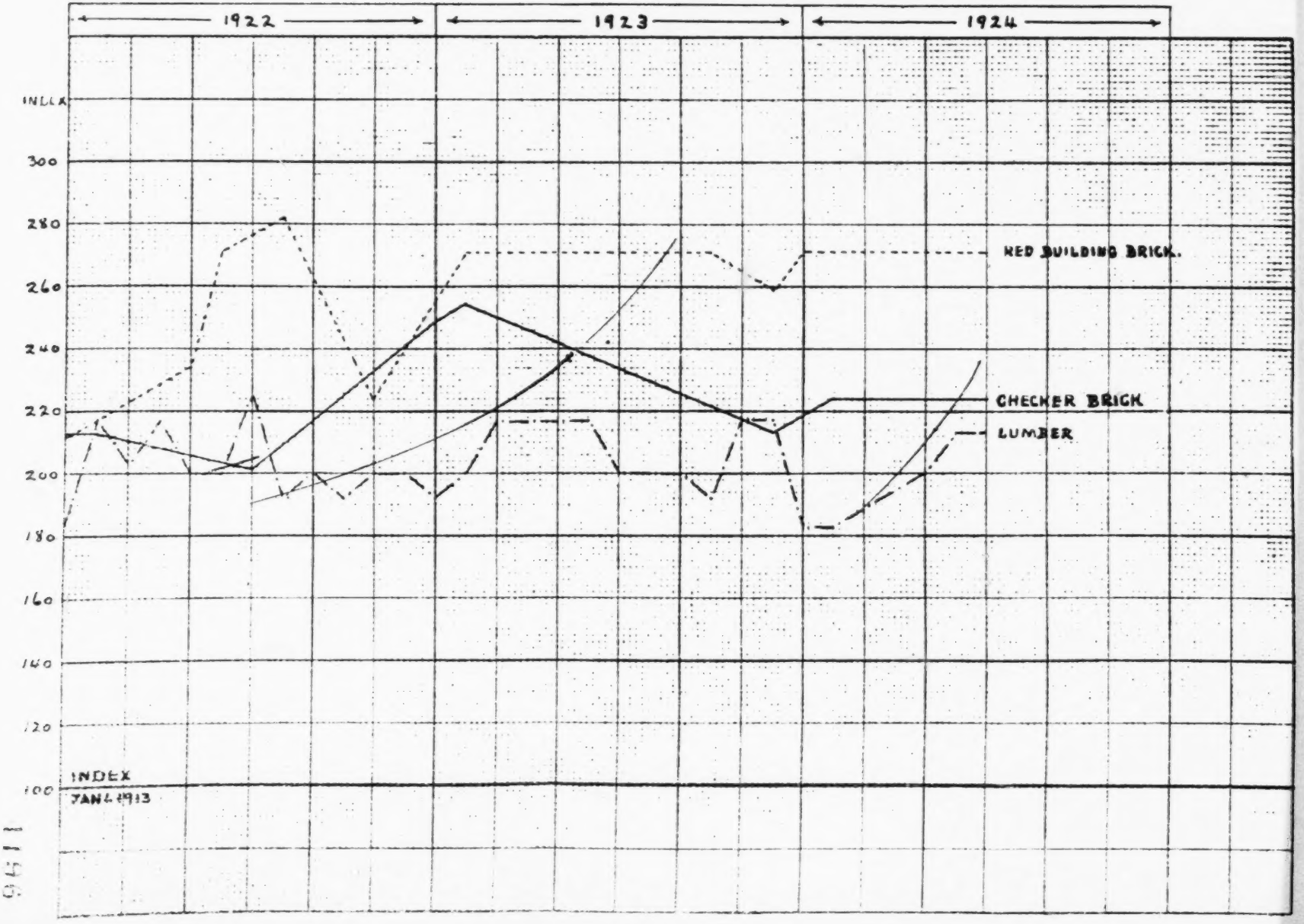
PLAINTIFF'S EXHIBIT NO. 1021

CONSOLIDATED GAS COMPANY OF NEW YORK

INDEX OF ACTUAL PRICES PAID

DURING THE PERIOD FROM JANUARY 1, 1922 TO JUNE 30, 1924,

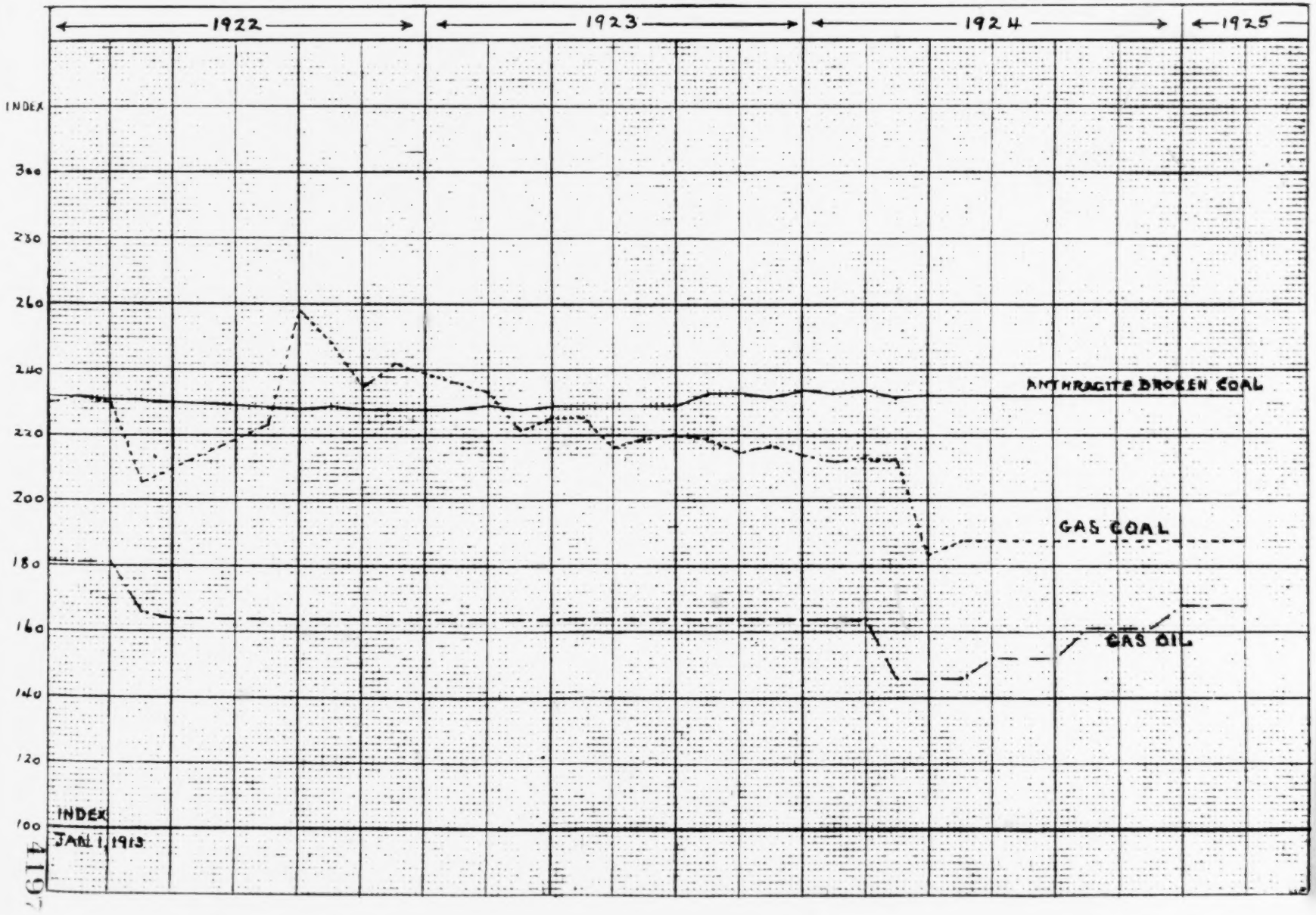
FOR COMMON BUILDING BRICK, CHECKER BRICK, AND 2" ROUGH SPRUCE LUMBER



9511

PLAINTIFF'S EXHIBIT NO. 1022

CONSOLIDATED GAS COMPANY OF NEW YORK
INDEX OF PRICES ACTUALLY PAID FROM JANUARY 1, 1922
AND TO BE PAID UPON EXISTING CONTRACTS TO MARCH 31, 1925,
FOR ANTHRACITE BROKEN COAL, GAS COAL AND GAS OIL.



PLAINTIFF'S EXHIBIT NO. 1025

COMPARISON OF ASTORIA WATER GAS COSTS AND CONSOLIDATED WATER GAS COSTS
28 MONTH PERIOD - FROM JANUARY 1, 1922 TO APRIL 30, 1924.

WATER GAS		ASTORIA WATER GAS ACTUAL Quan. per M.	ASTORIA WATER GAS ACTUAL Unit Price	ASTORIA WATER GAS ACTUAL Cost per M.C.F.	ASTORIA WATER GAS BASED ON CONS. UNIT PRICES Quan. per M.	ASTORIA WATER GAS BASED ON CONS. UNIT PRICES Cons. Unit Price	ASTORIA WATER GAS BASED ON CONS. UNIT PRICES Cost per M.C.F.	CONSOLIDATED WATER GAS ACTUAL Quan. per M.	CONSOLIDATED WATER GAS ACTUAL Unit Price	CONSOLIDATED WATER GAS ACTUAL Cost per M.C.F.	VARIATION CONSOLIDATED WATER GAS COMPARED WITH ASTORIA WATER GAS Cost per M. C. F.
Total Generator Fuel	Lbs.	34.61	$8.418	$.1301	34.61	$10.393	$.1606	32.61	$10.393	$.1513	(.0093)
Total Boiler Fuel	"	11.77	7.291	.0383	11.77	7.895	.0415	14.57	7.895	.0513	.0098
Handling Generator Fuel				.0029			.0029			.0122	.0093
Handling Boiler Fuel				.0006			.0006			.0020	.0014
TOTAL WATER GAS FUEL				.1719			.2056			.2168	.0112
Gas Oil	Gals.	3.883	.05611	.2179	3.883	.05577	.2165	3.789	.05577	.2113	(.0052)
Iron Mass, City Water, Sundry Supplies, etc.				.0059			.0059			.0094	.0035
TOTAL MATERIAL				.3957			.4280			.4375	.0095
Residual Credit - Oil Tar				.0355			.0355			.0321	(.0034)
-Drip Oil				.0015			.0015			.0016	.0001
TOTAL CREDIT FROM RESIDUALS				.0370			.0370			.0337	(.0033)
Deduct Residual Expense				-			-			.0009	(.0009)
Net Credit from Residuals				.0370			.0370			.0328	(.0042)
NET MATERIALS				.3587			.3910			.4047	.0137
Electric Power House Operation				.0040			.0040			-	(.0040)
Gas Making Labor				.0278			.0278			.0293	.0015
Maintenance - Labor				.0183			.0183			.0227	.0044
Maintenance - Material				.0120			.0120			.0165	.0045
Miscellaneous Works Expense (Excluding Rental Paid to City for Bulkheads)				.0092			.0092			.0133	.0041
TOTAL - Exclusive of Gas Storage				$.4300			$.4623			$.4865	$.0242
Gas Made - M. cu.ft.		27,592,251						22,289,745			

(Figures in Brackets ( ) i

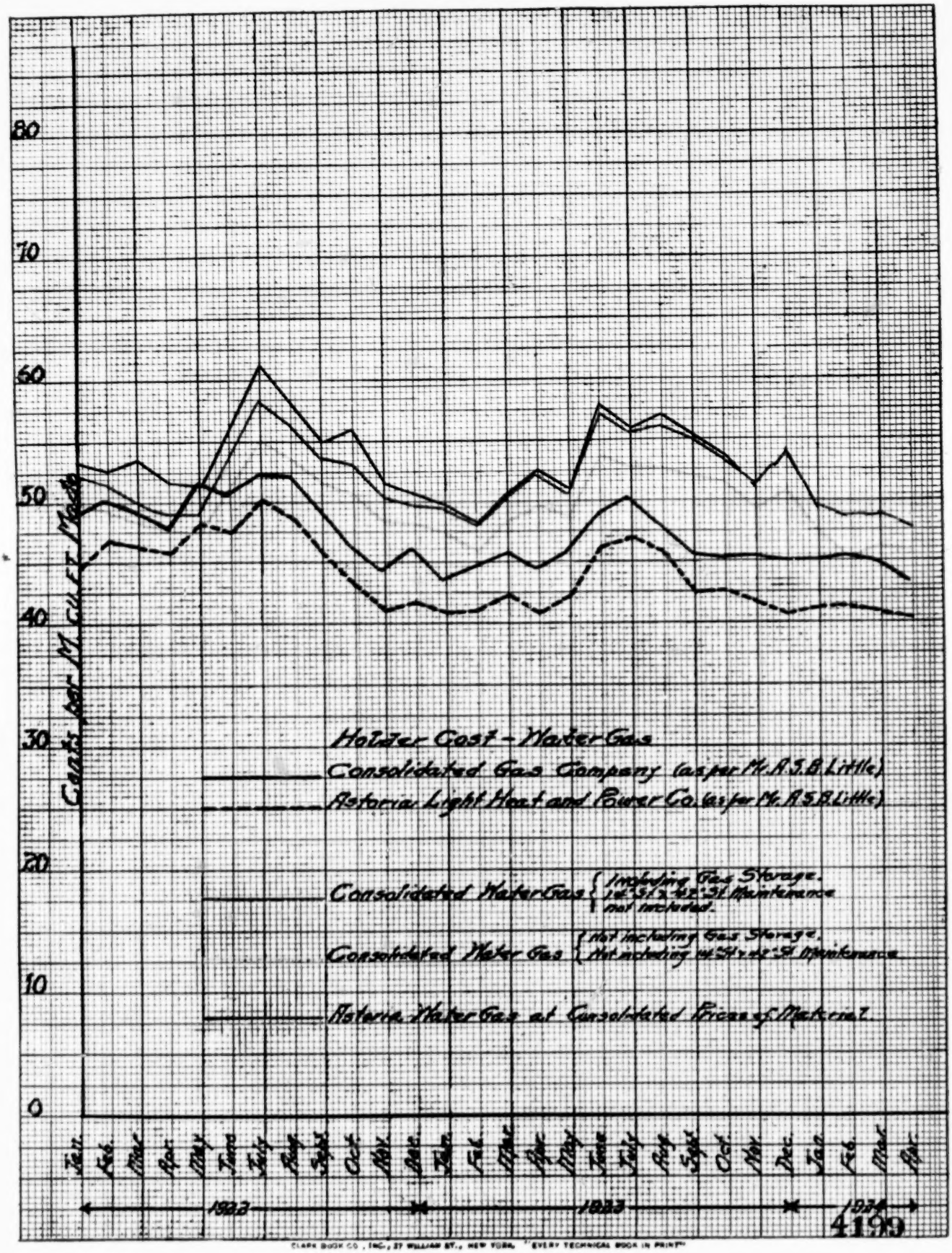
Gas Storage	(a)	$.0002	$.0242
Rental Paid City for Bulkheads, etc.	(b)		.0037

(a) The expense of Gas Storage applicable to the delivery of all the gas furnished by the Consolidated Gas Company to its consumers (including the cost of operati holder stations, governor houses, etc., used by the Consolidated Gas Company) is all charged as a part of the Cost of Gas Production at the Manhattan Plants of Consolidated Gas Company. Such holders and facilities handle and distribute all of the gas made at Astoria and sold to the Consolidated Gas Company, as well as made by the Consolidated Gas Company and the gas purchased by the Consolidated Gas Company from other Companies. The Astoria Plant Cost includes only the sum o per M. cubic feet as the unit cost of operating the holders at the Astoria Plant.

(b) In Manhattan, the Company pays rental to the city for the use of various bulkheads, etc., needed in connection with its plants. This rental is charged as an its corresponding item appears in the Production Expense at the Astoria Plant, as the Company owns those bulkheads and pays no rental therefor.

PLAINTIFF'S EXHIBIT NO. 1026

80 DIVISIONS PER INCH


Costs per M Cubic Feet
80
70
60
50
40
30
20
10
0
Holder Cost - Water Gas
Consolidated Gas Company (as per Mr. R.S.B. Little)
Astoria Light Heat and Power Co. (as per Mr. R.S.B. Little)
Consolidated Water Gas { Including Gas Storage. 1st 31 x 2nd 31 Maintenance not included.
Consolidated Water Gas { Not including Gas Storage. Not including 1st 31 x 2nd 31 Maintenance
Astoria Water Gas at Consolidated Prices of Material
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr.
1932
1933
1934

4199

CLARK BOOK CO., INC., 27 WILLIAM ST., NEW YORK. "EVERY TECHNICAL BOOK IN PRINT"

PLAINTIFF'S EXHIBIT NO. 1027

ACTUAL PRODUCTION COST
JANUARY 1, 1922 TO APRIL 30, 1924
(28 months)

	Astoria Plant All Gas Made Cost per M.C.F.	Consolidated Plan All Gas Made Cost per M.C.F.
Coking Coal	$.1954	-
Handling	.0079	-
TOTAL COKING COAL	.2033	-
Residuals - Coke and Breeze	.1414	-
Coal Tar	.0148	-
Cyanogen	.0067	-
Ammonia (Absolute)	.0009	-
Ammonium Sulphate Equivalent	.0129	-
Carbon	.0000	-
Total Credit from Residuals	.1767	-
Deduct Residual Expense - Coke	.0076	-
Other Residuals	.0098	-
Total Deductions	.0174	-
NET CREDIT FROM RESIDUALS	.1593	-
NET COST OF COAL CARBONIZED	.0440	-
Bench Fuel	.0225	-
Total Boiler Fuel	.0083	-
Handling Boiler Fuel	.0001	-
TOTAL COAL GAS FUEL	.0309	-
Total Generator Fuel	.0923	$ .1513
Total Boiler Fuel	.0272	.0513
Handling Generator Fuel	.0021	.0122
Handling Boiler Fuel	.0004	.0020
TOTAL WATER GAS FUEL	.1220	.2168
Gas Oil	.1646	.2113
Iron Mass, City Water, Sundry Supplies, etc.	.0080	.0094
TOTAL MATERIAL	.3698	.4375
Residual Credit - Oil Tar	.0267	.0321
Drip Oil	.0011	.0016
Total Credit from Residuals	.0278	.0337
Residual Expense	-	.0009
Net Credit from Residuals -	.0278	.0328
NET MATERIALS	.3417	.4047
Electric Power House Operating	.0079	-
Gas Making Labor	.0440	.0293
Maintenance-Labor	.0298	.0227
Maintenance-Material	.0217	.0165
Miscellaneous works Expense (Excluding Rental Paid to City for Bulkheads, etc.)	.0143	.0133
Total (Not Including Gas Storage)	$.4594	$.4865

Coal Gas Made - M. cu.ft.	11,270,777	
Water Gas Made- M. cu.ft.	27,892,251	22,289,745
Total Gas Made- M. cu.ft.	38,663,028	22,289,745

Gas Storage	(a)	$.0002	$.0242
Maintenance, 14th St. and 42nd St. Stand-by Plants	(b)		.0078
Rental paid City for Bulkheads, etc.	(c)		.0037

(a) The expense of Gas Storage applicable to the delivery of all the gas furnished by the Consolidated Gas Company to its consumers (including the cost of operating the holder stations, governor houses, etc., used by the Consolidated Gas Company) is all charged as a part of the cost of Gas Production at the Manhattan Plants of the Consolidated Gas Company. Such holders and facilities handle and distribute all of the Gas Made at Astoria and Sold to the Consolidated Gas Company, as well as the Gas Made by the Consolidated Gas Company, and the gas purchased by the Consolidated Gas Company from other companies. The Astoria Plant Cost includes only the sum of $.0002 per M. cubic feet as the unit cost of operating the holders at the Astoria Plant.

(b) Until October 30, 1923, the 14th Street and 42nd Street Coal Gas Plants were maintained as Stand-by Plants for emergency use and the expense of repairs, labor, etc., at those plants was charged on the Company's books to the Cost of Gas Production at Manhattan Plants.

(c) In Manhattan, the Company pays rental to the City for the use of various bulkheads, etc., needed in connection with its plants. This rental is charged as an expense of Gas Production. No corresponding item appears in the Production Expenses at the Astoria Plant, as the Company owns those bulkheads and pays no rental therefor.

1200

(Note) For comparative purposes, Items (a), (b) and (c) have been excluded in the above computation.

[fol. 4201] PLAINTIFF'S EXHIBIT No. 1028

Mr. A. S. B. Little's Computation of Production Cost on Basis Assumed by Him, Corrected so as to Give Effect to Actual Present Prices of Material, etc.

	Coal Gas—"A" House:	A. S. B. Little's Exhibit	Little's Exhibit corrected	
1	Coking Coal	$ 5446	$ 5708	(a)
2	Handling	.0264	0264	
3	Total Coal	5710	5972	
4	Residuals: Coke	4896	4896	
5	Coal Tar	0528	0548	(b)
6	Ammonical Liquor	0005		(c)
7	Cyanogen	0233	0149	(d)
8	Ammonia	0031	0032	(e)
9	Ammonium Sulphate	0416	0356	(f)
10	Carbon	0002	0002	(g)
11	Ammonium Concentrate	0028		(h)
12	Total Residual Credit	.6139	5983	

(a) Coking Coal—Mr. Little uses 200 lbs. per M at $6.10 per gr. ton. Average value of stock on hand plus contracted for $6.3925 per gr. ton 200 lbs. per M at $6.3925 per gr. ton=$.5708 per M C. F.

(b) Coal Tar—Mr. Little uses 1923 quantity & unit price—1.118 gals. per M at 4.72¢ per gal. Present price—4.9¢ per gal. 1.118 gals. per M at 4.9¢ per gal.=$.0548 per M. C. F.

(c) Ammoniacal Liquor Equiv. Lbs. Sulphate—Mr. Little uses 1923 quantity & Unit price—.047 lb. per M at 1.06¢ per lb. (See Ammonium Sulphate (f).)

(d) Cyanogen—Mr Little uses 1923 quantity and unit price—.124 lb. per M at 18.73¢ per lb. Present price—12¢ per lb. .124 lb. per M at 12¢ per lb.=$.0149 per M. C. F.

(e) Ammonia (absolute)—Mr Little uses 1923 quantity and unit price—.032 lb. per M at 9.75¢ per lb. Present price 10¢ per lb. .032 lb. per M at 10¢ per lb.=$.0032 per M. C. F.

(f) Ammonium Sulphate—Mr. Little uses 1923 quantity and unit price—1.183 lbs. per M at 3.52¢ per lb. Present price 2.612¢ per lb.

	Ammonium Sulphate	1.183 lbs. per M
(c)	Ammoniacal Liquor Equiv. lbs. Sulphate	.047 lbs. per M
(h)	Ammonium Concentrate Equiv. lbs. Sulphate	.133 lbs. per M
	Total ammonium sulphate	1.363 lbs. per M

1.363 lbs. per M at 2.612¢ per .b.=$.0356 per M. C. F.

(g) Carbon—Mr. Little uses 1923 quantity and unit price—.019 lb. per M. at 1¢ per lb. Present Price $17 per net Ton=.85¢ per lb. .019 lb. per M at .85¢ per lb.=$.0002 per M. C. F.

(h) Ammonium Concentrate—Mr. Little use- 1923 quantit- and unit price—.0236 gals. per M at 12¢ per gal. Converted to Equivalent pounds Ammonium Sulphate as follows: .0236 gal. x 90 ozs. per gal. + 16 oz. lb.=.133 lb. per M. See Ammonium Sulphate (f).

		A. S. B. Little's Exhibit	Little's Exhibit corrected	
13	Deduct: Residual Expense—Coke	0222	0222	
14	Other Residuals	0325	0325	
15	Total Deductions	0547	0547	
16	Net Credit from Residual	5592	5436	
17	Net Cost of Coal Carbonized	0118	0536	
18	Bench Fuel—Coke	0737	0737	
19	Boiler Fuel—Coal	0014	0014	
20	Boiler Fuel—Purchased Coke	0006	0006	
21	Boiler Fuel—Coke	0137	0137	
22	Boiler Fuel—Water Gas Tar	0126	0126	
23 24 25	Handling Boiler Coal / Handling Boiler Coke / Handling Boiler	0005	0005	
26	Total Coal Gas Fuel	1025	1025	
27	Gas Oil	0057	0058	(i)
28	Iron Mass	0060	0060	
29	Water	0043	0043	
30	Sundry Supplies	0014	0014	
31	Handling Spent Material	0009	0009	
32	Total Material	1326	1745	
33 34	Residuals: Water Gas Tar Sold / Drip Oil Sold	0009	0009	
35	Total Residuals Sold	0009	0009	
36	Net Material	1317	1736	
37	Gas Making Labor—Superintendence	0088	0088	
38	Boiler House	0037	0037	

(i) Gas Oil—Mr. Little uses 1923 quantity—.107 gallon per M and a unit price of 5.35¢ per gal. Average Value of stock on hand, plus contracted for—5.375¢ per gal. .107 gal. per M at 5.375¢ per gal.=$.0058 per M. C. F.

		A. S. B. Little's Exhibit	Little's Exhibit corrected
39	Retort House	0676	0676
40	Purifier House	0058	0058
41	Total Gas Making Labor.	0859	0859
42	Electric Power House Operating	0136	0136
43	Total Material & Labor	2312	2731
44	Repairs:		
45	Works & Station Structures	0118	0118
46	Furnaces, Boilers & Accessories.	0006	0006
47	Steam Engines	0001	0001
48	Benches and Retorts	0328	0328
49	Purification Apparatus	0060	0060
50	Holders	0008	0008
51	Miscellaneous Equipment	0296	0296
52	Works Tools	0032	0032
53	Total Repairs—Labor		
54	" " —Material		
55	Total Repairs	$ 0849	$ 0849
56	Miscellaneous Works Epense.	0272	0272
57	Gas Storage—Manufacturing Stat'n	0002	0002
58	Total Cost of Gas in Holder on Mr. Little's basis	$ 3435	$ 3854

[fol. 4202] Water Gas—"C" House:

1	Coal in Generators	$	$
2	Coke " "	1303	1303
3	Purchased Coke in Generators	0012	0012
4	Coal under Boilers	0023	0023
5	Purchased Coke under Boilers	0008	0008
6	Coke under Boilers	0189	0189
7	Water Gas Tar under Boilers	0177	0177
8	Handling Generator Coal		
9	" " Coke	0022	0022
10	" Boiler Coal	0001	0001
11	" Boiler Purchased Coke		
12	" " Coke	0005	0005
13	" Generator Purchased Coke		
14	Total Water Gas Fuel	1740	1740

		A. S. B. Little's Exhibit	Little's Exhibit corrected
15	Gas Oil	2016	2025 (a)
16	Iron Mass	0024	0024
17	Shavings	0001	0001
18	Water	0018	0018
19	Sundry Supplies	0010	0010
20	Handling Spent Material	0006	0006
21	Total Material	3815	3824
22	Residuals: Water Gas Tar Used	0230	0230
23	Water Gas Tar Sold	0125	0125
24	Water Gas Tar Variation on hand	(0002)	(0002)
25	Drip Oil Sold	0016	0016
26	" " Variation on Hand	0001	0001
27	Total Residuals	0370	0370
28	Net Material	3445	3454
29	Gas Making Labor:		
	Superintendence	0039	0039
30	Boiler House	0063	0063
31	Generator House	0197	0197
32	Purifier House	0005	0005
33	Total Gas Making Labor	0304	0304
34	Electric Power House Operating	0047	0047
35	Total Material and Labor	3796	3805
36	Repairs:		
37	Works and Station Structures	0042	0042
38	Furnaces, Boilers & Accessories	0043	0043
39	Steam Engines	0015	0015
40	Water Gas Sets and Accessories	0157	0157
41	Purification Apparatus	0019	0019
42	Holders	0011	0011
43	Miscellaneous Equipment	0092	0092

(a) Gas Oil—Mr. Little uses 1923 quantity—3.767 gals. per M and a unit price of 5.35¢ per gal. Average value of stock on hand plus contracted for—5.375¢ per gal. 3.767 gals. per M at 5.375¢ per gal.—$.2025 per M C. F.

		A. S. B. Little's Exhibit	Little's Exhibit corrected
44	Works Tools	0010	0010
45	Total Repairs—Labor		
46	Total Repairs Material		
47	Total Repairs	$ 0389	$ 0389
48	Miscellaneous Works Expense	0108	0108
49	Gas Storage	0002	0002
50	Total Cost of Gas in Holder on Mr. Little's Basis	$ 4295	$ 4304

[fol. 4203] Water Gas—"D" House:

1	Coal in Generators	0209	0258 (a)
2	Coke " "	1047	1047
3	Purchased Coke in Generators	0055	0055
4	Coal under Boilers	0023	0023
5	Purchased Coke under Boilers	0007	0007
6	Coke under Boilers	0189	0189
7	Water Gas Tar under Boilers	0177	0177
8	Handling Generator Coal	0005	0005
9	" " Coke	0028	0028
10	" Boiler Coal	0001	0001
11	" Boiler Purchased Coke	0007	0007
12	" " Coke		
13	" Generator Purchased Coke		
14	Total Water Gas Fuel	1748	1797
15	Gas Oil	2011	2020 (b)
16	Iron Mass	0024	0024
17	Shavings	0001	0001
18	Water	0019	0019
19	Sundry Supplies	0009	0009

(a) Coal in Generators—Mr. Little uses 1923 quantity and unit price—5.44 lbs. per M at $8.620 per gr. ton. Average value of stock on hand plus contracted for—$10.615 per gr. ton. 5.44 lbs. per M at $10.615 per gr. ton=$.0258 per M. C. F.

(b) Gas Oil—Mr. Little uses 1923 quantity—3.759 gals. per M and a unit price of 5.35¢ per gal. Average value of stock on hand, plus contracted for—5.375¢ per gal. 3.759 gals. per M at 5.375¢ per gal.=$.2020 per M. C. F.

		A. S. B. Little's Exhibit	Little's Exhibit corrected
20	Handling Spent Material	.0005	.0005
21	Total Material	.3817	.3875
22	Residuals: Water Gas Tar Used	.0237	.0237
23	Water Gas Tar Sold	.0128	.0128
24	Water Gas Tar Variation on Hand	(.0016)	(.0016)
25	Drip Oil Sold	.0017	.0017
26	" " Variation on Hand	.....	.....
27	Total Residuals	.0366	.0366
28	Net Material	.3451	.3509
29	Gas Making Labor:		
	Superintendence	.0036	.0036
30	Boiler House	.0061	.0061
31	Generator House	.0144	.0144
32	Purifier House	.0009	.0009
33	Total Gas Making Labor	.0250	.0250
34	Electric Power House Operating	.0035	.0035
35	Total Material and Labor	.3736	.3794
36	Repairs:		
37	Works and Station Structures	.0022	.0022
38	Furnaces, Boilers and Accessories	.0032	.0032
39	Steam Engines	.0005	.0005
40	Water Gas Sets and Accessories	.0114	.0114
41	Purification Apparatus	.0007	.0007
42	Holders	.0007	.0007
43	Miscellaneous Equipment	.0082	.0082
44	Works Tools	.0008	.0008
45	Total Repairs—Labor	.....	.....
46	Total Repairs—Material	.....	.....
47	Total Repairs	$ .0277	$ .0277

		A. S. B. Little's Exhibit	Little's Exhibit corrected	
48	Miscellaneous Works Expense	.0100	.0100	
49	Gas Storage	.0002	.0002	
50	Total Cost of Gas in Holder on Mr. Little's Basis	$ 4115	$ 4173	
	[fol. 4204] Coal Gas—"B" House:			
1	Coking Coal	$ 5446	$ 5708	(a)
2	Handling	.0279	.0279	
3	Total Coal	.5725	.5987	
4	Residuals: Coke	4896	4896	
5	Coal Tar	0460	0478	(b)
6	Ammonical Liquor	0002		(c)
7	Cyanogen	0215	0136	(d)
8	Ammonia	0028	0029	(e)
9	Ammonium Sulphate	0441	0380	(f)
10	Carbon	0001	0001	(g)

(a) Caking Coal—Mr. Little uses 200 lbs. per M at $6.10 per gr. ton. Average value of stock on hand plus contracted for $6.3925 per gr. ton. 200 lbs. per M at $6.3925 per gr. ton=$.5708 per M C. F.

(b) Coal Tar—Mr. Little uses 1923 quantity and unit price—.976 gal. per M at 4.71¢ per gal. Present Price—4.9¢ per gal. .976 gal. per M at 4.9¢ per gal.=$.0478 per M C. F.

(c) Ammoniacal Liquor Equiv. lbs. Sulphate—Mr. Little uses 1923 quantity and unit price=.021 lb. per M at .82¢ per lb. See Ammonium Sulphate (f).

(d) Cyanogen—Mr. Little uses 1923 quantity and unit price—.113 lb. per M at 19¢ per lb. Present Price—12¢ per lb. 113 lb. per M at 12¢ per lb.=$.0136 per M C. F.

(e) Ammonia (absolute)—Mr. Little uses 1923 quantityq and unit price—.029 lb. per M at 9.75¢ per lb. Present Price—10¢ per lb. .029 lb. per M at 10¢ per lb.=$.0029 per M C. F.

(f) Ammonium Sulphate—Mr. Little uses 1923 quantity and unit price—1.267 lbs. per M at 3.68¢ per lb. Present Price—2.612¢ per lb.

Ammonium Sulphate	1.267 lbs. per M
(c) Ammoniacal Liquor Equiv. lbs. Sulphate	.121 lb. per M
(h) Ammonium Concentrate Equiv. lbs. sulphate	.167 lb. per M
Total Ammonium Sulphate	1.455 lbs. per M

1.455 lbs. per M at 2.612¢ per lb.=$.0380 per M C. F.

(g) Carbon—Mr. Little uses 1923 quantity and unit price—.009 lb. per M at 1¢ per lb. Present price $17 per Net Ton=.85¢ per lb. .009 lb. per M at .85¢ per lb.=$.0001 per M C. F.

		A. S. B. Little's Exhibit	Little's Exhibit corrected	
11	Ammonium Concentrate	0035		(h)
12	Total Residual Credit	6078	5920	
13	Deduct: Residual Expense—Coke	0288	0288	
14	Other Residuals	0338	0338	
15	Total Deductions	0626	0626	
16	Net Credit from Residuals	5452	5294	
17	Net Cost of Coal Carbonized	0273	0693	
18	Bench Fuel—Coke	0725	0725	
19	Boiler Fuel—Coal	0015	0015	
20	Boiler Fuel—Purchased Coke	0006	0006	
21	Boiler Fuel—Coke	0136	0136	
22	Boiler Fuel—Water Gas Tar	0125	0125	
23 24 25	Handling Boiler Coal / Handling Boiler Coke / Handling Boiler Purchased Coke	0005	0005	
26	Total Coal Gas Fuel	1012	1012	
27	Gas Oil	0057	0058	(i)
28	Iron Mass	0060	0060	
29	Water	0047	0047	
30	Sundry Supplies	0021	0021	
31	Handling Spent Material	0012	0012	
32	Total Material	1482	1903	
33 34	Residuals: Water Gas Tar Sold / Drip Oil Sold	0009	0009	
35	Total Residuals Sold	0009	0009	
36	Net Material	1473	1894	

(h) Ammonium Concentrate—Mr. Little uses 1923 quantity and unit price—.0297 gal. per M at 12¢ per lb. Converted to equivalent pounds Ammonium Sulphate as follows: .0297 gal. x 90 ozs. per gal. + 16 oz.=.167 lb. per M. (See Ammonium Sulphate (f).

(i) Gas Oil—Mr. Little uses the same quantity as the "A" plant for 1923—.107 gal. per M and a unit price of 5.35¢ per gal. Average Value of Stock on Hand, plus contracted for—5.375¢ per gal. .107 gal. per M at 5.375 per gal.=$.0058 per M C. F.

		A. S. B. Little's Exhibit	Little's Exhibit corrected
37	Gas Making Labor—Superintendence	0086	0086
38	Boiler House	0039	0039
39	Retort House	0604	0604
40	Purifier House	0054	0054
41	Total Gas Making Labor	0783	0783
42	Electric Power House Operating	0218	0218
43	Total Material & Labor	2474	2895
44	Repairs:		
45	Works and Station Structures	0076	0076
46	Furnaces, Boilers and Accessories	0007	0007
47	Steam Engines	0001	0001
48	Benches and Retorts	0583	0583
49	Purification Apparatus	0053	0053
50	Holders	0009	0009
51	Miscellaneous Equipment	0366	0366
52	Works Tools	0014	0014
53	Total Repairs—Labor	.....	.....
54	" " —Material	.....	.....
55	Total Repairs	$ 1109	$ 1109
56	Miscellaneous Works Expense	0264	0264
57	Gas Storage—Manufacturing Sta'n	0002	0002
58	Total Cost of Gas in Holder on Mr. Little's Basis	$ 3849	$ 4270

[fol. 4204a]

Summary

Estimated 1924-25 Cost of Producing Gas at Astoria Plant on Basis Assumed by Mr. A. S. B. Little

	A. S. B. Little Exhibit—Sheet 14			A. S. B. Little Exhibit—Corrected		
	M c. f.	Amount	Cost per M c. f.	M c. f.	Amount	Cost per M c. f.
"A" House	3,541,497.0	$1,216,504	$ .3435	3,541,497	$1,364,893	$ .3854
"B" House	3,882,933.0	1,494,541	.3849	3,882,933	1,658,012	.4270
"C" House	8,219,138.1	3,530,120	.4295	8,219,138	3,537,517	.4304
"D" House	9,044,459.0	3,721,795	.4115	9,044,459	3,774,253	.4173
Total & Average	24,688,027	$9,962,960	$ .4036	24,688,027	$10,334,675	$ .4186
Net increase Due to Added Cost producing Mixed gas of not less than 650 B. T. U. at present price of Gas Oil			.0479			.0479
			$.4515			$ .4665

See Mr. Woods' Schedule (Mim. S. M., Page 5559, May 6, 1924).

Gas Oil:

Net Increase in Cost—Last Line on Page 5560

1 11 gallons at $ 055256 per gallon (the average price of Oil for the Year 1923) ..... $ 0613 per M.

1.11 gallons at $.05375 per gallon the average price of stock on hand plus contracted for	$ 0597 " "	
Decrease in Cost of Oil due to Present Price	$ 0016 " "	
		$ 0016 per M.
Net Increase in Cost of Producing 650 B. T. U. Mixed Gas at Present Price of Gas Oil		$ 0479 " "

[fol. 4205] PLAINTIFF'S EXHIBIT No. 1032

Comparison of Rates of Pay of Labor Between Those Existing on June 1, 1923, and Those of July 25, 1924

(Rates of Pay under Union Agreements—Rates Ordinarily Paid by the North-Eastern Construction Company)

	Dollars per day		
	June 1, 1923	June 25, 1924	Per cent of increase
Labor:			
Common Labor	$6 00	$6 00	.....
Bricklayers	10 00	12 00	20%
Carpenters	9 00	10 50	16⅔%
Mason Helpers and Concrete Laborers	7 00	8 00	14 3%
Iron Workers	9 00	10 50	16⅔%
Cement Finisher	9 00	10 50	16⅔%

[fol. 4206] PLAINTIFF'S EXHIBIT No. 1033

Jul. 3, 1924:

Plasterers, union men, $15 day; bring tools; steady work. 244th and Jericho Turnpike, or 1218 102d St., Ozone Park, L. I., up till 9 A. M.

Plasterer, white, finishers, $14 day; big job. Foreman, P. Cunnane, Faille St. and Whitlock ave., Bronx.

Jul. 4, 1924:

Plasterers, union men, $15 day; bring tools; steady work. 244th and Jericho Turnpike, or 1218 102d St., Ozone Park, L. I., up till 9 A. M.

Jul. 5, 1924:

Plasterers, union men, $15 day; bring tools; steady work. 244th and Jericho Turnpike, or 1218 102d St., Ozone Park, L. I., up till 9 A. M.

Jul. 6, 1924:

Bricklayers, $15 day; Bronx Park South, 2 blocks east Southern Boulevard at 182d st.

Bricklayers, $15 day; big steel job just started. 125 E. 93d st.

Jul. 7, 1924:

Bricklayers, $15 day; Bronx Park South, 2 blocks east Southern Boulevard at 182d st.

Bricklayers, $15 day; big steel job just started. 125 E. 93d st.

Bricklayers wanted; $14 a day; new school. W. L. & G. H. O'Shea, Warburton av. and 4th and 5th sts., Bayside, Queens.

Jul. 8, 1924:

Bricklayers, $15 day; Bronx Park South, 2 blocks east Southern Boulevard at 182d st.

Bricklayers wanted, 197th St. and Webb Av., $16 day.

Bricklayers, $15 day; big steel job just started. 125 E. 93d st.

Plasterers, white, finishers; $14 day; big job. Falle st. and Whitlock av., Bronx. Foreman P. Cunnane.

Plasterers, union men, union wages, good bonus. 158th st. and Walton av.

Plasterers, cornice hands; $14 per day. 41 5th av.

Jul. 9, 1924:

Bricklayers wanted. 197th St. and Webb Av., $16 day.

Bricklayers, $15 day; big steel job just started. 125 E. 93d st.

Jul. 10, 1924:

Carpenters, framers, $10.50 a day. Apply Montclair Athletic Club, Valley Road, Montclair, N. J.

Bricklayers wanted. 197th St. and Webb Av., $16 day.

Bricklayers wanted; $16 day. 4329 Broadway.

Bricklayers, front men, $15. Richardson av., E. 238th st., Bronx, new building.

Plasterer, first-class, $15 day. Grand st., near car barn, Maspeth.

Plasterers, first class finishers; $14 per day, 41 5th av.

Jul. 11, 1924:

Carpenters, framers, $10.50 a day. Apply Montclair Athletic Club, Valley Road, Montclair, N. J.

Carpenter, floor layer. $10.50. 201 W. 13th.

Bricklayers, front men, $15. Richardson av., E. 238th st., Bronx, new building.

Plasterers—First class finishers, on 41 5th av., $14 per day.

[fol. 4207] Jul. 13, 1924:

Plasterers, long job; good men for white mortar, $15 day. Lyne av., Sea Gate, Coney Island.

Jul. 14, 1924:

Plasterers, long job; good men for white mortar, $15 day. Lyne av., Sea Gate, Coney Island.

Jul. 15, 1924:

Plasterers on large job just started, salary $14 per day. Apply Ely av. and Temple st., Astoria, L. I. Take Astoria subway to Grant av.

Plasterer, mechanic only, $16, steady. 7 to 8.30 A. M. 157 E. 116th.

Jul. 16, 1924:

Plasterers. Apply on large job just started at Ely av. and Temple st., Astoria, L. I. Take Astoria subway to Grand av.; wages $14 per day.

Jul. 17, 1924:

Plasterers, union men, good mechanics, for white mortar; $16 per day; ready to work. Fillmore and Flatbush av., Brooklyn; Anderson.

Jul. 18, 1924:

Plasterers wanted, Grand st., near car barn; $14 per day. Maspeth, L. I.

Jul. 20, 1924:

Carpenters—Two good trimmers; $11. 216th st. and Willett av., Bronx.

Plasterers wanted, cornice hands; $14 per day, new school. Port Washington, L. I.

Plasterers wanted, hard finishers; $14 per day. 199th st. and Grand Concourse.

Jul. 22, 1924:

Plasterers, cornice hands wanted at 41 5th av. and 332 W. 86th st., $14 per day.

Bricklayers for front. $16. Richardson av., E. 238th st., Bronx.

Jul. 24, 1924:

Plasterers, mechanics, helpers also; $16; 7 to 8 A. M. 157 E. 116th st.

Jul. 25, 1924:

Plasterers (2), union men only; $15 per day. Call before 10 A. M. 135 Grand st.

Plasterers. $15, $16. Ogden av., between Jerome and 162d st.

Jul. 27, 1924:

Plasterers wanted, $14 day; new school, No. 5, Port Washington, L. I. O'Connor & Hanahan.

Plasterers. $15, $16. Ogden av., between Jerome and 162d st.

Plasterer, mechanic, $16; helpers, $3. Call 10 A. M. 157 E. 116th st.

Jul. 28, 1924:

Plasterers. $15, $16. Ogden av., between Jerome and 162d st.

Plasterers wanted; $18 day; work in Bronx. Beldrone, 2346 Lorillard place, corner 184th st., 3d av.

[fol. 4208] PLAINTIFF'S EXHIBIT No. 1034

North-Eastern Construction Company

Comparison of Costs of the Principal Items of Construction, June 1, 1923, and July 25, 1924

[fol. 4209] Purifier House "O"—11th Street Plant Consolidated Gas Company

Class of work	Item, quantities	Unit cost in place	Total cost in place	Unit price, labor	Total labor cost	Unit price, materials	Total materials cost
				As of June 1, 1923			
Concrete Footings, 1-3-5..	117 Cu. Yd.....	10.69	1,250.73	3.50	409.50	1.19	841.23
Footing Forms.....	1,817 Sq. ft.....	.106	192.60	.049	89.03	.057	103.57
Brickwork, Common.....	955.71 M.....	49.55	47,355.43	20.96	20,031.68	28.59	27,323.75
Structural Steel.....	109,810 Lbs.....	.0623	6,841.16	.0145	1,592.25	.0478	5,248.91
Lumber, Y. P. (Average Price)	5.612 M. B. M.....	103.74	582.19	35.00	196.42	68.74	385.77
Lumber, Spruce (Average Price)	4.789 M. B. M.....	91.17	436.61	35.00	167.62	56.17	268.99
Totals.....			$56,658.72		$22,486.50		$34,172.22
				As of July 25, 1924			
Concrete Footings, 1-3-5..	117 Cu. Yd.....	10.96	1,282.32	4.00	468.00	6.96	814.32
Footing Forms.....	1,817 Sq. ft.....	.111	201.69	.057	103.57	.054	98.12
Brickwork, Common.....	955.71 M.....	50.47	48,234.68	24.77	23,672.94	25.70	24,561.74
Structural Steel.....	109,810 Lbs.....	.0587	6,445.85	.0169	1,855.79	.0418	4,590.06
Lumber, Y. P. (Average Price)	5.612 M. B. M.....	102.29	574.05	40.95	229.81	61.34	344.24
Structural Steel..... Price)	4.789 M. B. M.....	96.87	463.91	40.95	196.11	55.92	267.80
Totals.....			$57,202.50		$26,526.22		$30,676.28

Labor increased..... 18%
Material decreased..... 10%
Total cost increased..... 1%

[fol. 4210] PLAINTIFF'S EXHIBIT No. 1035

Statement Showing Investment in the 11th, 21st and 99th Street Plants of the Consolidated and in the Plant of the Astoria Light, Heat and Power Company, From January 1, 1922, to April 30, 1924, for the Purpose of Determining the Cost of Carrying These Properties per M Cu. Ft. of Gas Actually Made at These Plants During the Period Mentioned

Investment in 11th Street Property—Gas Manufacturing Plant

	Land	Plant	
December 31, 1921	$1,763,535 67	$3,532,713 92	
December 31, 1922	1,763,535 67	3,537,126 65	
December 31, 1923	1,763,535 67	3,584,228 47	
	$5,290,607 01	$10,654,069 04	$15,944,676 05

Land taken from Plaintiff's Exhibit 820—Page 2.
Plant taken from Plaintiff's Exhibit 821—Page 9.

Average Investment for the Period	$5,314,892 02	
Return on this Investment computed for a period of 20 Months, the period of ownership of this property by the Plaintiff Company, that is, from September 1, 1922 to April 30, 1924 at 8% per annum		$708,652 27

Statement Showing Investment—Continued

Taxes during period 1922 as per books and Teele Exhibit #814:		
Page 4—for 4 Months of 1922	$69,497 08	
For Year—1923—Teele Exhibit 817—page 4	208,144 10	
For 4 Months of 1924—as per Company's Books 1/3 Taxes assessed for Year—1924	42,620 70	
		320,261 88
		$1,028,914 15

[fol. 4211]

21st Street Gas Manufacturing Plant

	Land	Plant	
December 31, 1921	$1,719,883 67	$3,941,063 88	
December 31, 1922	1,719,883 67	3,886,433 56	
December 31, 1923	1,723,187 88	4,932,293 13	
	$5,162,955 22	$12,759,790 57	$17,922,745 79

December 31, 1921, 1922 and 1923 Land from Exhibit #820—Page 2.
December 31, 1921, 1922 and 1923 Plant from Exhibit #821—Page 5.

Average Investment during this period	5,974,248 60
Return on this Investment Computed for a period of 28 Months, that is, from January 1, 1922 to April 30, 1924 at 8% p r annum	$1,115,193 07

Taxes during 1922 period as per books and Teele Exhibit #814—Page 4, Shown in 11 items	127,751 24
For Year—1923—Teele Exhibit #817—Page 4 shown in 11 items	127,286 70
For 4 Months of 1924—as per Company's books 1/3 Taxes assessed for Year—1924—11 Items	53,745 10
Return on Investment—Taxes during period	$1,423,976 11

[fol. 4212] 99th Street Gas Manufacturing Plant

	Land	Plant	
December 31, 1921	$631,309 37	$1,148,867 73	
December 31, 1922	631,309 37	1,098,221 35	
December 31, 1923	631,309 37	1,136,050 16	
	$1,893,928 11	$3,383,139 24	$5,277,067 35

December 31, 1921, 1922, 1923—Land from Exhibit #820—Page 4.
December 31, 1921, 1922, 1923—Plant from Exhibit #821—Page 6.

Average Investment during this period	$1,759,022 45
Return on this Investment computed for a period of 28 Months, that is, from January 1, 1922 to April 30, 1924 at 8% per annum	$328,350 86
Taxes for Year—1922—Teele Exhibit #814—Page 5—2 items	40,425 00
Taxes for Year—1923—Teele Exhibit #817—Page 5—2 items	39,647 80
For 4 Months 1924—as per Company's Books 1/3 Taxes assessed for Year—1924—2 items	17,079 33
Return on Investment and Taxes during period	$425,502 99

[fol. 4213] Summarizing the three plants, namely, 11th Street, from September 1, 1922 to April 30, 1924, and 21st Street and 99th Street from January 1, 1922 to April 30, 1924, the Return on Investment and Taxes on these properties during the aforementioned period is as follows:

11th Street Plant	$1,028,914.15
21st Street Plant	1,423,976.11
99th Street Plant	425,502.99
Total	$2,878,393.25

Gas made at these Plants during this period—22,289,745 M cu. ft. as per Exhibit #1027.

Carrying Charge—Equivalent to 12.91 cents per M Cu. Ft. of Gas Made.

[fol. 4214] Investment in the Astoria Plant

	Land and plant	
December 31, 1921	$24,881,160.58	
December 31, 1922	25,769,744.29	
December 31, 1923	26,557,522.56	
	$77,208,427.43	
December 31, 1921—from Plaintiff's Exhibit #829—Page 1.		
December 31, 1922—from Plaintiff's Exhibit #829—Page 15.		
December 31, 1923—from Plaintiff's Exhibit #829—Page 10.		
Average Investment during this period		$25,736,142.48
Return on this Investment computed for a period of 28 Months, that is, from January 1, 1922 to April 30, 1924 at 8% per annum		$4,804,079.93
Taxes on land and improvements during 1922 as per books in evidence		563,050.96
Taxes on land and improvements during 1923 as per books in evidence		666,397.09

Taxes on land and improvements—4 months 1924 as per books Astoria Company—1/3 Taxes assessed for Year—1924	235,662.92
Return on Investment and Taxes during this period	$6,269,190.90

Gas made at this Plant during the period, as per Exhibit #1027, 38,863,028 M Cu. Ft. Carrying Charge equivalent to 16.13 cents per M Cu. Ft. of Gas Made.

[fol. 4215] Final Summary

Exhibit #1027 shows

Cost of Gas—Astoria Plant during period January 1, 1922 to April 30, 1924	$.4594
Carrying Charge and Taxes—Cost Per M	.1613
Total Cost Including Taxes and Return on Investment	$.6207
Cost of Gas at the Consolidated Plants during this period—as per exhibit	.4865
Carrying Charge and Taxes—Cost per M	.1291
Total Cost Including Taxes and Return on Investment	$.6156
Astoria Cost in excess of Consolidated Gas Costs after giving effect to Return on Investment and Taxes on property devoted to the manufacture of gas	$.0051

[fol. 4216]

PLAINTIFF'S EXHIBIT No. 1036

Astoria Tunnel

Comparison of Estimates

Item No.		I. V. D. estimate	Other estimate	Difference
1	Exc., shaft, earth, ab'e M. S. L.	$16,394 40	$16,394 40	.....
2	" " " bel. " " "	62,496 00	62,496 00	.....
3	" " rock " " " "	755,122 50	470,347 40	$284,755
4	" tunnel rock " " " "	2,725,985 00	1,263,465 35	1,462,522
5	" " bad ground	386,631 00	443,014 29	—56,383
6	Concrete, shaft	150,579 00	171,557 10	—20,978
7	" tunnel, sound ground	747,840 00	585,184 80	162,655
8	" " bad "	143,784 00	119,380 66	24,403
9	Stone packing	4,500 00	4,500 00	.....
10	Grout, shaft	1,890 00	1,890 00	.....
11	" tunnel, low pressure	213,030 00	256,464 45	—43,434
12	" " high "	746,480 00	376,191 20	370,288
13	Cast steel lining	196,560 00	230,903 40	—34,343
14	Cast iron lining	24,624 00	30,360 48	—5,736
15	Bolts	32,400 00	26,400 00	6,000
16.	Sheet steel piling	19,375 20	19,375 20	.....
17	Structural steel	29,797 00	29,797 00	.....
18	Iron castings	16,560 00	16,560 00	.....
19	Timbering	7,236 90	2,795 00	4,441

20 Test holes, diamond drill	896,000 00	30,000 00)	
20-A Test holes, percussion drill	.....	660,758 00\	205,242
21 Pumping Plant	225,000 00	123,700 00	101,300
22 Pumping	243,000 00	317,520 00	—74,520
23 Preparing site	5,000 00	5,000 00	.....
24 Engineer's office	20,000 00	20,000 00	.....
25 Exploratory borings	45,000 00	45,000 00	.....
26 Concrete cradle	.....	5,978 00	—5,978
— Items not classified	462,917 00	.....	462,917

NOTE.--In the last column the items which are larger in the other estimate than in Mr. Davis' estimate are marked thus —.

[fol. 4217] PLAINTIFF'S EXHIBIT No. 1037

Cost of Astoria Tunnel Exclusive of Mains, Equipment, Head Houses, etc., to August 31, 1916, as Shown by the Books of the Astoria Light, Heat and Power Company

Preliminary		$39,336 53
Contract Work		
Plant and Equipment:		
Foundations	$9,888 82	
Buildings	52,697 26	
Machinery & Apparatus	252,990 09	
Tools & Implements	30,380 99	
Boats & Scows	8,284 43	
Furniture & Fixtures	10,061 53	
Railroad & Equipment	27,560 94	
Stone Crushing Plant	6,242 74	
Emergency Hospital	420 66	
		$398,527 46
Tunnel Shaft—Astoria End:		
Earth Excavation	22,769 78	
Rock "	92,248 44	
Concrete Lining	47,116 37	
Machinery & Pumps	4,461 71	
Pumping & Drainage	7,912 78	

Repairs to Tools & Implements	280,273 24	
Rentals	35,956 46	
Incidentals	5,858 04	
		496,596 82
Tunnel Shaft—Bronx End:		
Earth Excavation	1,110 17	
Rock Excavation	47,567 32	
Concrete Lining	22,292 33	
Machinery & Pumps	2,598 02	
Pumping & Drainage	4,249 41	
Repairs to Tools & Implements	91,973 82	
Rentals	48,432 94	
Incidentals	896 81	
		219,120 82
Tunnel:		
Rock Excavation	711,983 26	
Concrete Lining	333,353 24	
Drainage	140,612 93	
Cast Iron Lining	17,937 70	
Cast Steel Lining	194,780 67	
		1,398,667 80

Cost of Astoria Tunnel—Continued

111th Street Drift:			
Rock Excavation	8,261 43		
Concrete Lining	1,111 87		
		9,373 30	
Less Salvage	24,343 42*	24,343 42*	
			$2,497,942 78
Forward			$2,537,279 31
Forward			$2,537,279 31
General Expenditures Engineering Expenses:			
Astoria End	$103,188 18		
Bronx End	92,336 47		
Incidentals	6,074 22		
[fol. 4218]		$201,598 87	
Office Expense:			
Draughtsmen	18,436 15		
Clerks	89,504 06		
Incidentals	21,283 84		
		129,224 05	
Sundry Expense:			
General Supervision	347,014 22		
Timekeepers	46,129 49		
Watchmen	44,825 95		

Insurance	134,352 12		
Accidents & Damages	35,760 04		
Incidentals	5,017 71		
Casualty Department:			
Hospital Labor	10,222 43		
" Supplies	3,664 89		
Inspectors	3,712 57		
Incidentals	582 35		
		631,281 77	
Commissions	213,256 99	213,256 99	
Interest during Construction	746,202 01	746,202 01	
Taxes during Construction	2,138 06	2,138 06	
			1,923,701 75
Total Direct Cost to August 31, 1916, as per books†			$4,460,981 06

[*Red in copy.]

†This figure does not include the cost of the mains laid in the tunnel, head-houses, permanent lighting, permanent pumping equipment, elevators, tracks and runways in the tunnel, nor any equipment or additional construction added subsequently to the construction period. It does not include any element of contractors' profit, as the Astoria Light, Heat & Power Company was the contractor. If fifteen per cent. were added for such overhead and profit, upon the above-stated contract work figure of $2,497,942.78, such sum would amount to $374,691.42, making the total $4,835,672.48. To and as of June 1, 1923, the aggregate investment in the Astoria tunnel, as shown by the books of the East River Company in evidence, was $5,192,821.75.

[fol. 4218a] STATEMENT RE CERTAIN OF DEFENDANTS' EXHIBITS

Defendants' Exhibits Nos. 1-20, 22-38 are vouchers for repairs, etc., Nos. 1, 7 & 11, are printed as typical, the others being omitted.

(Here follow side folio pages 4219, 4220, 4221, 4222, 4223, 4224, 4225, 4226, 4227, and 4228)

[fol. 4228a] DEFENDANTS' EXHIBIT No. 21

American Society of Civil Engineers

The Astoria Tunnel Under the East River for Gas Distribution in New York City

By John Vipond Davies, M. Am. Soc. C. E.

With Discussion by Messrs. F. Lavis, Milton H. Freeman, W. H. Bradley, James F. Sanborn, Edward Wegmann, R. C. Kellogg, W. W. Brush, Thomas H. Wiggin, William Cullen Morris, and John Vipond Davies

[fol. 4229] American Society of Civil Engineers

Instituted 1852

Tranasctions

This Society is not responsible for any statement made or opinion expressed in its publications.

DEFENDANTS' EXHIBIT NO. 1

Form W. 2254-1-23

(Printed in copying ink)

Voucher No. 21640
Paid OCT 2 - 1923
By check No. 56672

Duke of Invoice

SEPT 12TH 1923

Consolidated Gas Company of New York

General Office: 130 East 15th Street, near Irving Place

B. W.

H.C.D.

1% CASH 10 DAYS To SHERWIN WILLIAMS CO 7144 Dr.

TERMS 30 1 10 Address BROWN ST & LISTER AVE NEWARK NJ

Posted in Sundry Creditors Ledger, folio 683 C

Order No.	Date of delivery of goods or work done		Please give order number, details of charges, and state where material was delivered, or work done				
						Audited OCT 2 - 1923 19	
							Auditor
S 942	SEPT	12	~~2247~~ GLS S W OIL STATION PT LT GRAY			1 75	515 90
			49.7 GL 49 ~~47.4~~				
			49.7 51.6 47.4				
			5 GLS S W FIRE PLUG RED			3 05	15 25
			51 GLS S W FAMILY PT-GREEN			2 80	142 80
			52.2 GLS S W SALMANDER SS BLACK			1 00	52 20
							726 15
			See Credit Memo ~~Shipped~~ Returned 9/24/23 C				$ 82 95
							$ 643 20
			Less 1% Discount				6 43
							636 77

4219

DELIVERED

PASSED FOR PAYMENT OCT 2 1923 EXECUTIVE COMMITTEE

Rec'd by Acc't'g Dep't	Rec'd by Pur'g Dep't	Rel'd to Acc't'g Dep't	Prices Checked by C.Q
SEP 15 1923			Prices Correct [signature] Purchasing Agent.

Receipt Voucher agrees with Invoice RT Extensions and Footings Correct C.Q

Entered in Contract Book Checked Against Order C.Q Indexed

Deductions Checked and Found Correct [signature] Classification Checked [signature] Voucher Checked [signature]

Accounts charged	Branch or Station	Amount
REPAIRS OF WORKS & STATION STRUCTURES	St. Station	643 21
Personal		6 43
		637 77

4220

CREDIT MEMORANDUM C.M. #3850

THE SHERWIN-WILLIAMS CO.

SALES OFFICES FACTORIES AND WAREHOUSES IN PRINCIPAL CITIES

BROWN STREET AND LISTER AVENUE, NEWARK, N.J.

Sept. 24th, 1923.
Consolidated Gas Co.,
130 E. 15th Street,
New York City.

Wood

We today credit your account as below

1 - Bbl.	(47.4 gls.) S W Oil Station Pt. Lt. Gray	1.76	82.95

4221

As per

CONSOLIDATED GAS COMPANY of NEW YORK № 13709

Received from Sherwin Williams Co By W. H. Slaton Dept.

QUANTITY	DESCRIPTION OF MATERIAL	WEIGHT	ACCOUNT TO BE CHARGED
5	Bbls Light Gray Oil Station paint 247 7/10 Gallons		Rep Works - Slaton Structure
1	Bbl Family Green 51 Galls		" " " "
1	Bbl Smoke stack Black 52 1/2 Galls		" " " "
5	Galls Fire Plug red		" " " "

Order No. 20525 Paid $

Requisition No. 59112 Deduct Yes/No $

Emergency No. Car No. Entered

Date of this Voucher Sept 12th 1923

Date Material Received Sept 12th 1923

Approved W. H. Shaw Supt.

VOUCHERS MUST REACH ACCOUNTING DEPT. 48 HOURS AFTER MATERIAL IS RECEIVED

4222

DEFENDANTS' EXHIBIT NO. 7

TELEPHONE ASTORIA 0338

12/1/24 AP 20463

HCD

DONNER LUMBER CO., INC.

OFFICE, YARDS, MILL AND WAREHOUSE

ELY AVE., NORTH JANE AND SUNSWICK STS.

LONG ISLAND CITY, N.Y.

SOLD TO 2% CASH 10 DAYS

September 1st, 1923.

Consolidated Gas Co.,
#10580 2/10/N30

Your Req. #783

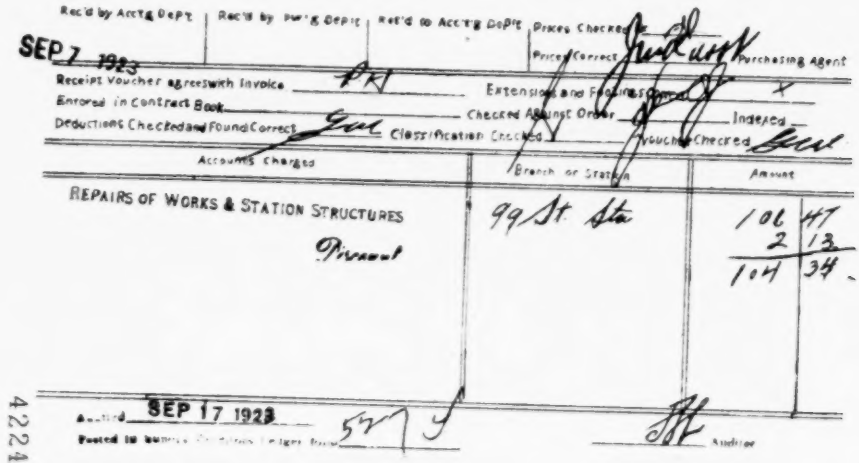
202 75

Delivered to 302 E 99th Street,

2730 ft. 3 X 10 50/18, 8/19, 2/20 at $39.00 M'	106	47	106.47
Less 2 % Discount			2 13
			104 34

PASSED FOR PAYMENT SEP 25 1923 EXECUTIVE COMMITTEE

4223



Rec'd by Acct'g Dept. | Rec'd by Pur'g Dept. | Ret'd to Acct'g Dept. | Prices Checked | Purchasing Agent

SEP 7 1923 | Price Correct

Receipt Voucher agrees with Invoice | Extensions and Footings Correct

Entered in Contract Book | Checked Against Order | Indexed

Deductions Checked and Found Correct | Classification Checked | Voucher Checked

Accounts Charged	Branch or Station	Amount
REPAIRS OF WORKS & STATION STRUCTURES	99 St Sta	106 47
Division		2 13
		104 34

Audited SEP 17 1923 | Auditor

Posted to Journal Folio Ledger Folio

4224

CONSOLIDATED GAS COMPANY of NEW YORK No. 3519

Received from Donner Lumber Co. By 1994 P. Date

QUANTITY	DESCRIPTION OF MATERIAL	WEIGHT	ACCOUNT TO BE CHARGED
150 pcs	3" X 10" X 18' V.G. Hd Lumber	7770	Ref. Station Structure

Order No. Paid $

Requisition No. Deduct Tax $

Emergency No. Car No. Entered

Date of this Voucher Dec 3 19 ..

Dept. Approved 19 ..

Approved W. Clark Supt.

VOUCHERS MUST REACH ACCOUNTING DEPT. 48 HOURS AFTER MATERIAL IS RECEIVED

4225

DEFENDANTS' EXHIBIT NO. 11
(Printed in copying inks)

b

Voucher No. 15206
Paid JUL 19 1923
By check No. 53717

Date of Invoice
June 20th 1923

Consolidated Gas Co.
Consolidated Gas Company of New York
130 East 15th St. N.Y.C.
General Office: 130 East 15th Street, near Irving Place

To Hecla Iron Works Dr

TERMS Net-30 days Address 116 No. 11th St. Brooklyn, N.Y.

Posted in Sundry Creditors Ledger, folio 36

Order No.	Date of delivery of goods or work done	Please give order number, details of charges, and state where material was delivered, or work done	Audited JUL 6 - 1923 / Auditor
15019	June 20/23	Changing counterscreen	$270.00
		Page #253.	

PASSED FOR PAYMENT
JUL 10 1923
EXECUTIVE COMMITTEE

ENTERED
JUL 5 1923
CONSTRUCTION DEPT.

4226

Rec'd by Aud'g Dep't JUN 22 1923 | Rec'd by Pur'g Dep't | Rec'd to Acc't'g Dep't | Prices Checked by

Prices Correct [illegible] Purchasing Agent.

Receipt Voucher agrees with Invoice RH * Extensions and Footings Correct

Entered in Contract Book Checked Against Order Indexed

Deductions Checked and Found Correct Classification Checked Voucher Checked

Accounts charged	Branch or Station	Amount
REPAIRS OF BUILDINGS	57th St Branch	270 00

Mr Geyser

JM P Form 562 10-28-21

Consolidated Gas Company of New York R. V. No. A 7729

ACCOUNTING DEPARTMENT

To Mr Morgan Sup't Coast

If following material has been received, forward Vouchers, immediately—if not received, return this request, so stating. 1-3723

Shipper Keeler Chas. & Co Order No. 15019 Req. No. 2564

Changing Countercurrent

4226A 4227 Follows

PLEASE RUSH

Rec'd by Auditing Dep't JUN 22 1923 | Rec'd by Pur'g Dep't | Rec'd by Aud'g Dep't | Prices Checked by

Prices Correct [illegible] Purchasing Agent

Receipt Voucher agrees with Invoice RH Extensions and Footings Correct

Entered in Contract Book Checked Against Order Indexed

Deductions Checked and Found Correct Classification Checked Voucher Checked

Accounts charged	Report by Station	Amount
REPAIRS OF BUILDINGS	57 Ch & Branch	270 00

R. V. No. A 7729

To Const Sup't

4227

REMARKS

ORIGINAL

WORKERS MUST REACH THE ACCOUNTING DEPT. WITHIN 48 HOURS AFTER ORDERS ARE ACCEPTED.

C 32817

CONSTRUCTION DEPT. **CONSOLIDATED GAS COMPANY**

Received from Neela Iron Works 6/30/43 19[illegible]

QUANTITY	DESCRIPTION OF MATERIAL	TO BE USED FOR
X	Fabricated Necessary Labor & Material to furnish & Install Sections of Screen and & Iron Gate of Counter Top to be setting Agent with Spacing Brackets instead of one at Our Book & Office 212 10, 8 7/8	For Repairs of Bldgs Branch & H Penn Street F 3747-X

Foreman

Labor Order

Requisition

Consumer or

Per Appn

Freight or Express Charges Paid

Paid Co.

For Pd. 19

Deduct Tax

Record Pd. By

Date Material Rec'd 6/28/43 19

Rec'd By Charles Seifert

Accpt. [signature]

(4228-A Follows)

4228

Paper No. 1359

The Astoria Tunnel under the East River for Gas Distribution in New York City*

By John Vipond Davies, M. Am. Soc. C. E.

With Discussion by Messrs. F. Lavis, Milton H. Freeman, W. H. Bradley, James F. Sanborn, Edward Wegmann, R. C. Kellogg, W. W. Brush, Thomas H. Wiggin, William Cullen Morris, and John Vipond Davies.

Synopsis

The object of this paper is to describe in general the design and construction of a tunnel of large magnitude, but generally simple in character, and to treat more particularly certain difficulties due to physical conditions encountered and methods used in overcoming them.

The work described consisted of sinking two shafts, 242 and 277 ft. deep, respectively, and driving a tunnel, 18 ft. on the vertical and 19 ft. on the horizontal axis, between these shafts, a distance of 4,662 ft., through rock under a river with a depth of water of 100 ft. The main problem was to drive through a zone of decomposed rock extending on the line of the tunnel for a distance of 450 ft.

The paper is divided into fifteen parts, as follows:

1. History of project and economic reasons for removal of gas plants from Borough of Manhattan to remote districts, by providing transmission of gas through a tunnel under the East River.

2. General description of the construction.

3. Description of the plant.

[fol. 4230] 4. Sinking of the shafts, 30 and 42 ft. external diameter, respectively.

5. Tunnel driving through various rocks under normal conditions. Geology of line of tunnel. Details of work accomplished, and rates of progress.

*Presented at the meeting of October 6th, 1915.

6. Tunneling through decomposed rocks under heavy water pressure, together with a geological description of the sheared contacts and conditions as actually found. In this part is described the method of thorough exploration of the rock formation by test drilling in advance and the consolidation of decomposed material by cement grouting to produce a rock formation through which the tunnel could be safely advanced by ordinary blasting. It also describes the methods of drilling, both with percussion and diamond drills, in preparation for grouting; the practical application and extent of the grouting operations; the use of buttresses to face rotten rock to permit of grouting; and the use of emergency bulkheads to secure the safety of the work and the employees.

7. Flooding of entire work by breaking out of seam before it was securely grouted and controlled.

8. Unwatering the tunnel and finally plugging and securing the source of water inlet and solidifying the rock; the methods considered and those adopted; the use of the air lift; the condition of the Portland cement after grouting; and the final completion of the tunnel excavation.

9. Cast-steel lining used through the bad rock section. Assumptions as to the design of the lining, the details, and the erection.

10. Drainage of the tunnel.

11. Ventilation of the tunnel.

12. Lighting of the tunnel.

13. Triangulation and alignment; methods used and results obtained.

14. Quantities of items making up the work; and details of costs of all work executed under normal conditions.

15. The laying of the gas mains in the tunnel. Two lines of 72-in. cast-iron pipe, each pipe length weighing 26,000 lb-. Heaviest cast-iron pipe ever manufactured. Special machinery designed and used for laying pipe. Special machine designed and made for testing joints of pipes as laid. Jointing and caulking of pipe mains.

[fol. 4231] The writer has endeavored to give a comprehensive description of the work as a whole, and to emphasize the portion of the paper covering the operation of passing through the zone of bad rock. It is hoped that the photographs and drawings which accompany the paper will assist in making clear the actual conditions encountered in the field.

1. Historical

About 35 years ago, before the general introduction of electricity, the production of gas for illuminating and heating purposes within the City of New York had reached such a point, with reference to the occupation of lands for manufacturing plants and local interference with city development, as to have made it desirable to consider the removal of these industries from the densely populated sections of the city.

Consequently, on June 21st, 1886, at the request of Mr. James W. Smith, then President of the Consolidated Gas Company, a report outlining the future policy of the Company was presented by Mr. William H. Bradley, then Engineer of the 44th Street Station of the Company, now Chief Engineer, in which the removal of the gas plants from Manhattan Island was strongly advocated. Following this report, the question was thoroughly ventilated in the public press, with strong advocacy of the suggestion that all companies then manufacturing gas on the Island of Manhattan should remove to sites outside the city, and that a great central manufacturing plant should be created on the Flushing Meadows, from which gas should be piped to a convenient point whence it might be conveyed by tunnel under the East River to Manhattan. For several years, however, nothing was done with this proposition. At that time the Ravenswood Gas Company, having a small manufacturing plant at the foot of Webster Avenue, East River, supplied gas locally in Long Island City. About 1891, this company was reorganized by Mr. Emerson McMillin, its corporate title was changed to East River Gas Company, and it obtained from the Legislature of the State of New York the necessary franchise rights to supply gas to New York City by a tunnel to be constructed under the East River.

In 1892 and 1893 the writer's firm constructed, for this new corporation, a small tunnel (internal diameter 10 ft. [fol. 4232] 2 in. in the portions which were iron lined and a rectangular section 10 by 8 ft. in the portions in solid rock) under the East River, crossing the two channels and Blackwell's Island. This tunnel (shown on Plate XXIV) extends from the foot of East 71st Street, Manhattan, to the Ravenswood works of the Company at the foot of Webster Avenue, Long Island City. Borings and soundings were made at close intervals across the channels, and as far as information could be obtained (with the extremely rapid current running in the East and West Channels of the East River), there was every reason to believe that the construction of a tunnel on that line would be through a practically continuous bed of rock, although the geological information indicated clearly the intrusion of a seam of dolomitic limestone under each channel.

The work on this tunnel was let out by contract, and proceeded very slowly for a considerable time, when, having sunk both shafts and having turned the tunnel on the Manhattan side of the river, decomposed rock was encountered at the contact between the gneiss and dolomite under the West Channel. The contractors immediately abandoned the work, and it was then carried on by the writer's firm, as Constructing Engineers, for account, and on behalf, of the Gas Company.

This tunnel was at a depth of nearly 100 ft. below mean low water. The depth of the water in the West Channel was 65 ft., but that in the East Channel was only about 30 ft. Under the West Channel two comparatively narrow sheared contacts in the dolomite rock were badly decomposed; under the East Channel the contacts between the Fordham gneiss, the mica schist, and the dolomitic formation were also extensively distorted, and, to some extent, decomposed, but the whole of this tunnel was completed successfully with the use of air pressure, the depth not being too great to prohibit this method of construction.

After the completion of this tunnel the East River Gas Company passed into the ownership of the Consolidated Gas Company, and thereafter, the Astoria Light, Heat & Power Company was organized to construct a great central gas manufacturing plant to supply gas to all the constituent

The lines of contact between the various formations, as determined on land, have been produced as straight lines under water, and the information shown on this map is doubtful to this extent.
The width of the limestone at the crossing of the 132d Street tunnel is especially doubtful, and possibly there are two narrow bands of limestone separated by gneiss, instead of the wide one shown, at this crossing the extent, direction, and even the existence of the Bronx Kills cross-fault is doubtful.

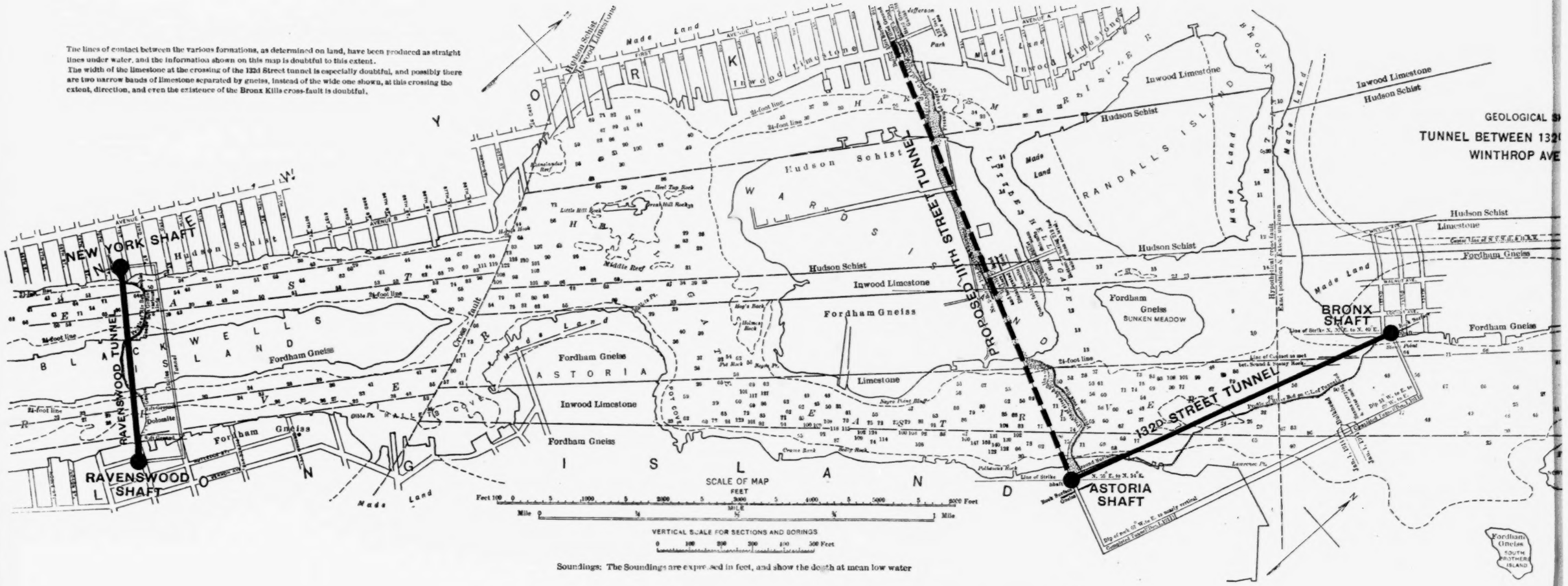
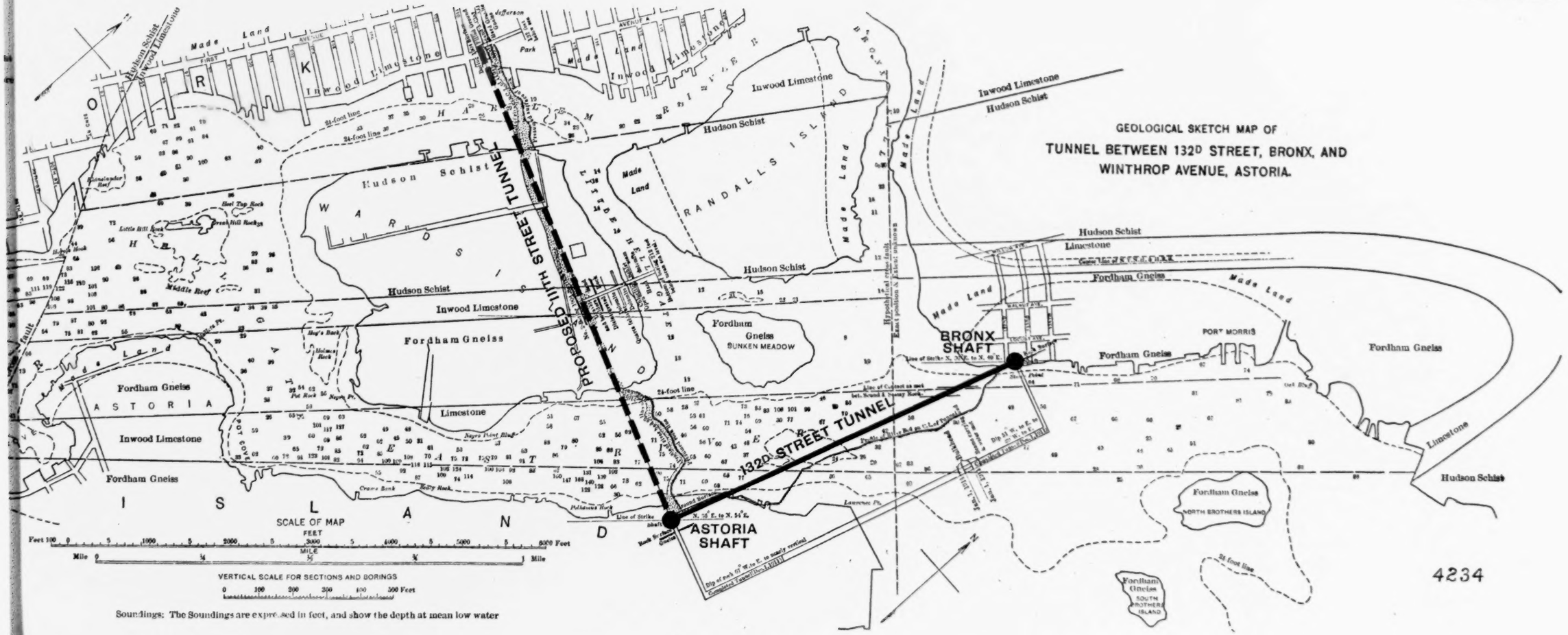


PLATE XXIV.
TRANS. AM. SOC. CIV. ENGRS.
VOL. LXXX, No. 1358.
DAVIES ON
THE ASTORIA TUNNEL.

GEOLOGICAL SKETCH MAP OF
TUNNEL BETWEEN 132D STREET, BRONX, AND
WINTHROP AVENUE, ASTORIA.



Soundings: The Soundings are expressed in feet, and show the depth at mean low water

4234

companies. This plant was established on a large tract of property at Lawrence Point, Long Island, at the northerly end of the channel known as Hell Gate.

[fol. 4233] For several years gas from both the Astoria and Ravenswood Plants, for the supply of Manhattan and The Bronx, had been carried through a large pipe line to Ravenswood and thence to Manhattan through the 71st Street tunnel in two 36-in. mains. The supply for The Bronx had been conducted in pipes laid in open coffer-dam construction across the Harlem River, involving a devious detour.

About 1903 it became necessary to consider an independent means of conducting to Manhattan the gas manufactured at the Astoria Plant, as at that time the center of gravity of the gas consumption of the Boroughs of Manhattan and The Bronx combined was at a point south of the Harlem River.

Long legal proceedings; to obtain an easement for a right of way for a tunnel or other means of communication, delay procedure with this undertaking for several years.

The line of this tunnel was definitely fixed by the necessities of the commercial situation, regardless of geological considerations, as the New York terminus had to be at 111th Street and Pleasant Avenue, where the Gas Company had a distributing station, and the Long Island terminus had to be on the property of the Company at Astoria, just north of Winthrop Avenue. The line, therefore, was laid out between these two points, the Astoria end being kept as close as possible to Winthrop Avenue, in order to conform to the final layout planned for the gas holders of the Company. This line passes under Ward's Island, where it was intended to sink an intermediate shaft for construction purposes, and from this shaft it was contemplated to drive a branch tunnel to a point in The Bronx. Borings were made at the sites of the entrance, outlet, and intermediate shafts, and the geological features were studied carefully.

(Here follows map marked side folio page 4234)

As the depth of the water in the channels on this line was somewhat in excess of 100 ft., and was so great that it was impossible to use air pressure, and as the known geological conditions made it certain that the contacts between the gneiss and dolomite formations would give more or less trouble, it was considered desirable to place the tunnel deep in the rock, in order to minimize trouble from open seams. On the other hand, the necessity (in event of a deeper location) for lengthening vertically the pipes for carrying the gas made it undesirable that these shafts should be deeper [fol. 4235] than was reasonably necessary to assure that the tunnel would pass below any serious difficulties of geological contact. Ultimately, the depth for the tunnel was decided on as 186½ ft. below mean sea level at the Manhattan Shaft descending to 218 ft. below that level at the Long Island Shaft. Within a prism on this line and grade, easements for right of way were acquired, and all legal proceedings were completed.

As before stated, these legal proceedings consumed considerable time, and in the interim the center of gravity of gas consumption had moved north of the Harlem River, with every indication that it would extend still farther north; and, by the time the Gas Company was ready to proceed with the work, it had become desirable to discontinue, for the time being, the plan for constructing the tunnel on the original line to 111th Street, and, instead, to proceed with that of delivering gas directly from the Astoria Plant to the Borough of The Bronx. At the same time, the Company did not desire, by any means, to abandon its rights to construct at a later date the tunnel from Astoria to East 111th Street, as originally laid out. This rearrangement necessitated the retention of the shaft near Winthrop Avenue, Astoria, and the purchase of land at Port Morris, at the foot of 132d Street, fronting on the East River, on which to construct a shaft as the northerly outlet of the tunnel near to, and suitable for a connection with, the distribution system of the Central Union Gas Works, at the foot of 138th Street and Locust Avenue, The Bronx.

The location of the underground prism for the easement for construction of the proposed future tunnel to 111th Street determined the depth of the Astoria Shaft for the tunnel to 132d Street, and an allowance for the necessary

drainage gradient toward Astoria determined the limitations of depth at the Bronx Shaft. At the same time, the grade of the tunnel was lowered to the utmost limit permissible within the prism forming the subterranean easement, as it was recognized that on this line the axis of the tunnel would be nearly parallel to the line of strike of the rock, and consequently to the planes of contact between the different geological formations to be penetrated, and therefore, in all probability, would involve more difficulties than the previously projected tunnel to 111th Street, which passed almost at right angles across these contacts. However, the [fol. 4236] Gas Company considered that, notwithstanding this, it would be simpler and wiser to face the constructive difficulties than to be under the necessity of adopting a new location which would involve a revival of the entire legal proceedings; and, on this basis, the work hereinafter described was designed and carried out. Plate XXV is a profile of the tunnel and the river bottom.

On account of the uncertainties which might arise in construction, as well as for various other reasons, the Company decided not to invite bids from contractors on this undertaking, but to carry out the work departmentally by its own forces, and the writer's firm was retained as Constructing Engineers in respect to the design and construction.

The following description records for the most part a work of tunnel construction of large magnitude, but comparatively simple in character, excepting only that the general location was at a deep level, with access only at vertical terminal shafts nearly a mile apart, and practically entirely below navigable waterways.

The intention, therefore, in the following presentation, is to describe, in outline only, the work of normal character involved in this construction, and to emphasize more particularly the difficulties encountered, and the methods by which they were overcome.

2.—Construction

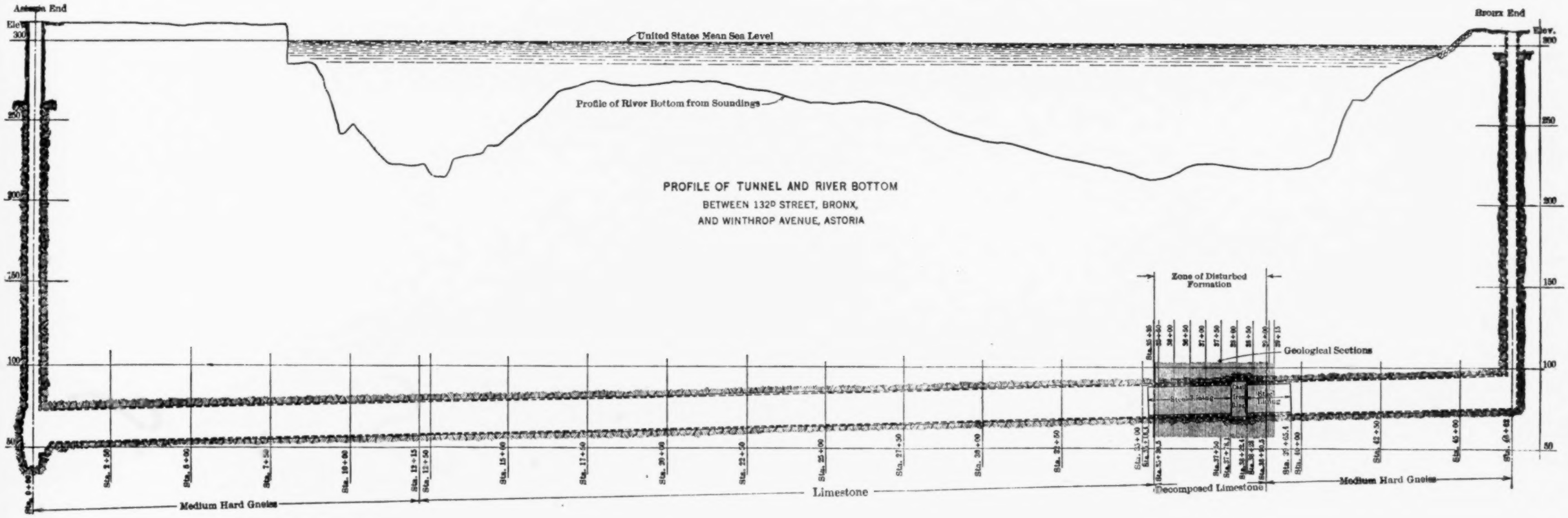
The construction involved in this undertaking consisted of a vertical shaft, 277 ft. deep, on the property of the Astoria Light, Heat and Power Company, at Astoria, a vertical shaft, 242 ft. deep, on private property in The Bronx, and a tunnel connecting these shafts.

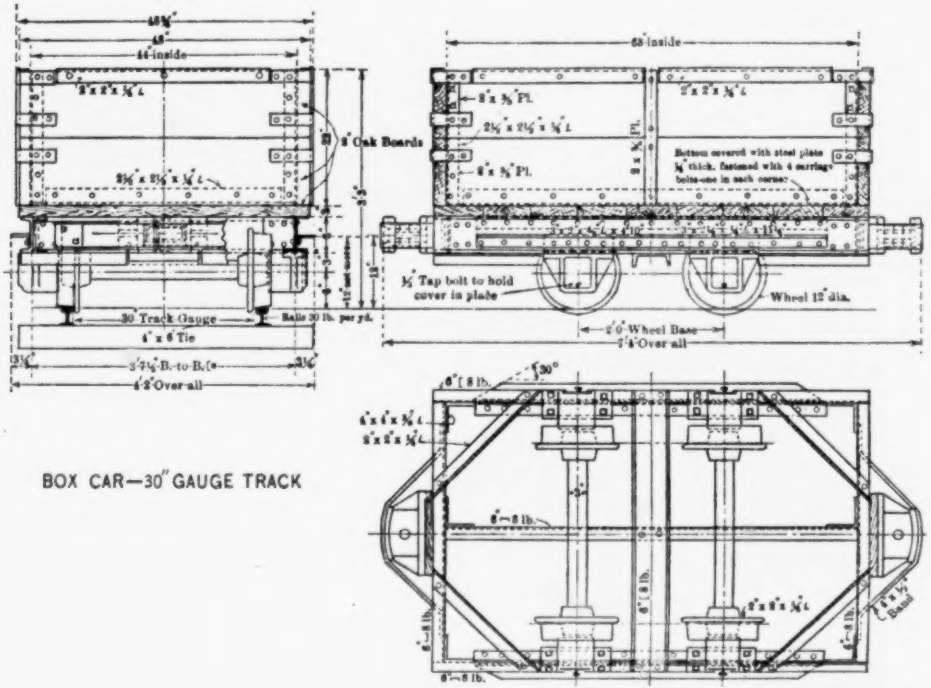
Anticipating the future construction of the previously planned tunnel direct to 111th Street, Manhattan, the shaft at Astoria was made larger than the one at The Bronx, in order to accommodate the future shaft installation necessary for the two tunnels; and a short portion of the tunnel on the line to 111th Street, Borough of Manhattan, was constructed, so that, as future necessities arose, this tunnel could be extended without disturbing the Astoria-Bronx service.

(Here follows map marked side folio page 4237)

The necessities for the gas distribution involved the provision of two 72-in. cast-iron mains from Astoria to The Bronx, with space in the upper portion of the tunnel for [fol. 4238] future developments and utilities. This caused the adoption of a tunnel cross-section 18 ft. on the vertical axis and 19 ft. on the horizontal axis. The vertical pipe risers, elevator frames, etc., made it necesary that the shaft should be 26 ft. in internal diameter at the Bronx terminal, and, though the original plan for an Astoria-Manhattan tunnel required a shaft at Astoria of only this same size, the modification, to provide for both a Bronx and a Manhattan tunnel, made it necessary to increase the internal diameter of the Astoria Shaft to 34½ ft.

Borings at the shaft sites showed that on the Astoria side there was a solid rock floor approximately 50 ft. below the surface of the ground, or about 40 ft. below mean sea level, the overlying material being a natural deposit of sand, gravel, and boulders, which, so near the East River, practically assured considerable water inflow in excavation. At the Bronx Shaft the rock floor was only some 13 ft. below the surface of the ground, and was overlaid with boulders, beach sand, and gravel. Soundings along the line of the tunnel indicated two river channels, each having a water depth of approximately 100 ft., with a high reef lying between them. The geologic survey maps indicated certain changes in the geological formation, with Stockbridge dolomite lying between the Fordham gneiss, which exists at the locations of the two shafts and extends for a considerable distance from each. The two deep-water channels clearly


Astoria End
Elev.
300
250
200
150
100
50
United States Mean Sea Level
Profile of River Bottom from Soundings
PROFILE OF TUNNEL AND RIVER BOTTOM
BETWEEN 132D STREET, BRONX,
AND WINTHROP AVENUE, ASTORIA
Bronx End
Elev.
Zone of Disturbed Formation
Geological Sections
Medium Hard Gneiss
Limestone
Decomposed Limestone
Medium Hard Gneiss


48"
48"
44" inside
2" x 2" x ¼" L.
2½" x 2½" x ¼" L.
8" Oak Boards
30" Track Gauge
Rails 30 lb. per yd.
4' x 6' Tie
3'7½" B.-to-B. of
4'2" Over all
68" inside
8" x ⅜" Pl.
2½" x 2½" x ¼" L.
8" x ⅜" Pl.
Bottom covered with steel plate ¼" thick, fastened with 4 carriage bolts—one in each corner
½" Tap bolt to hold cover in plate
Wheel 12" dia.
2'0" Wheel Base
7'4" Over all
6" [8 lb.
30°
6' x 4' x ¾" L.
2" x 2" x ¼" L.
6'—8 lb.
6'—8 lb.
6'—8 lb.
6'—8 lb.
2" x 2" x ¼" L.
7" x ½" Bars

BOX CAR—30" GAUGE TRACK

FIG. 1.

4239

define the contacts at each end between the gneiss and dolomite.

3.—Plant

The properties for plant use, which were fenced in for the exclusive use of the Tunnel Department, consisted of a plot 255 by 230 ft., aggregating 1.35 acres, at the Astoria Shaft, and a plot 394 by 100 ft., aggregating 0.96 acre, at the Bronx Shaft. For the transportation of men and materials between the two plants, a strong, gasoline, motor-driven boat, commonly called an "oyster boat," was purchased. The hull was of wood, 51 ft. long and 14½ ft. beam. The boat was equipped with an excellent, 25-h. p., direct-driven engine, with screw propeller.

(Here follows drawing marked side folio page 4239)

In laying out the plant, careful consideration was given the question of water transportation for excavated material, involving the use of scows and the utilization of the excavated material to fill other lands owned by the Company. A dock existed at the Astoria plant, but there was only a broken rock shore with extremely steep slopes [fol. 4240] at the Bronx plant, at which site a crib dock had to be built. At the Astoria dock, 230 ft. frontage was allotted to the Tunnel Department, and this provided berths for two scows; at the Bronx dock only one scow could be docked on the frontage of 108 ft.

As the tunnel was to be entirely in rock, it was desirable to use a car of as large a capacity as possible, with its body so low that a man could readily load it. For handling rock excavation the writer has found that a car having a wooden body is more convenient and economical in operation and maintenance than a steel car. Figs. 1 and 3 illustrate the car designed for this purpose; it consisted of a substantial steel underframe with an oak box body. Dumping arrangements were avoided, as they would have introduced additional height and an increase in mechanism subject to damage.

The dumps, which were placed directly over the scows at the docks, consisted of a revolving tipple, Fig. 2 such as used in coal-mining practice, operated with a 3-cylinder

air engine, and the cars were turned completely over in discharging into the chutes.

In order to discharge excavated material into the scows, an elevated deck was built at each shaft, extending from the shaft to the dock. Having ample space at the Astoria Shaft, a trestle loop was built entirely around the shaft location, so that the cars could be operated around the loop, with an extension to the dock, as well as a connection to the rock crusher which was used during part of the tunnel construction. Electric locomotives were used for operating the cars on these trestles between the shafts and the docks. Although there were two such locomotives at each shaft, only one was in service at any given time. These were 3-ton mine locomotives, manufactured by the Westinghouse Electric Company, equipped with two 8-h. p. 250-volt, direct-current motors, with a drawbar pull of 900 lb. at 6.6 miles per hour. Power for the locomotives was supplied by third-rail contact from the tunnel lighting circuit.

The mechanical plant at each shaft was planned with the expectation that considerable water (and consequent pumping) would be encountered in the tunnel driving, and that a full complement of rock drills and labor-saving devices would be necessary, and with the intention of constructing half the length of the tunnel from each shaft. The following plant was used.

(Here follows drawing marked side folio page 4241)

[fol. 4242] Astoria Plant

Boiler-Room.—

Four 302-h. p. Heine Water-tube boilers, } 1,840 total
Two 316-h. p. " " " " } boiler h. p.

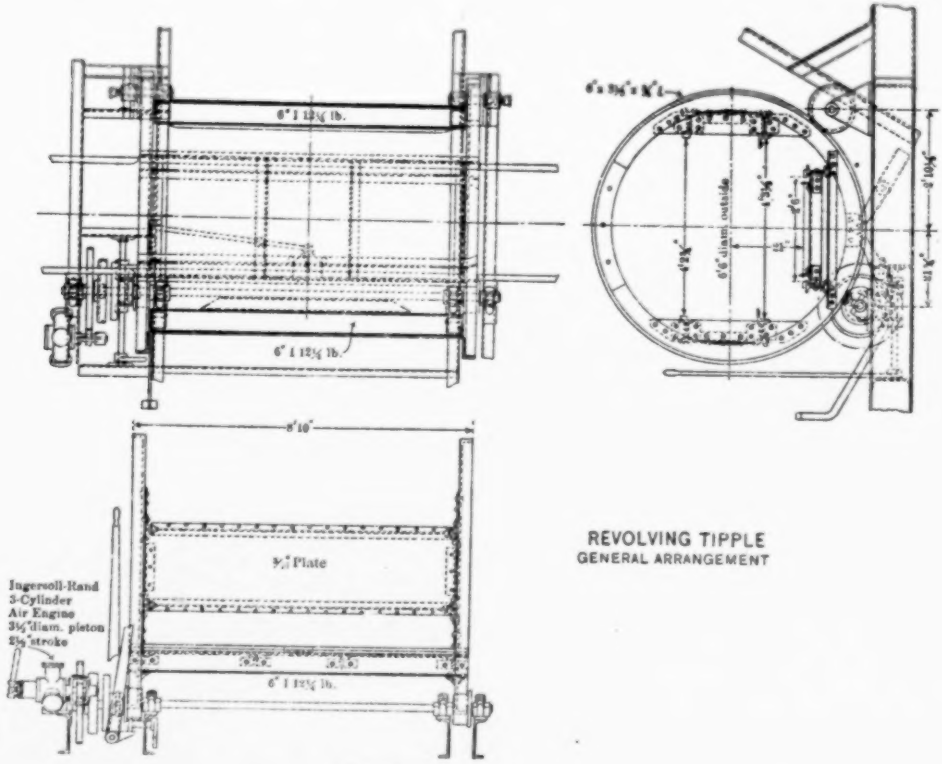
Six 20-in. Typhoon turbine blowers—L. J. Wing Manufacturing Company.

Engine-Room.—

Two 100-lb. pressure, Ingersoll-Rand air compressors; total capacity, 3,200 cu. ft. per min.

Two 42-in. Ingersoll-Rand after-coolers.

Two 54 by 120-in. Ingersoll-Rand air receivers.



REVOLVING TIPPLE
GENERAL ARRANGEMENT

FIG. 2.

4241

One hot-well tank, 48 in. diameter, 96 in. high—G. Stuebner.
Two 50-kw., 200-ampere, 250-volt, General Electric generators.
Two 75-h. p. Harrisburg Foundry and Machine Company, horizontal engines.
One Walker Electric Company switch-board for 250-kw. generators.
Two 1,200-boiler h. p. Worthington boiler feed pumps.
One 250-gal. per min. Worthington duplex pump.
One surface condenser and feed-water heater combined—12,600 lb. of steam per hour—Wheeler Condenser and Engineering Company.
One vacuum oil separator and simplex pump—12,000 lb. steam per hour—Warren Webster Company and Warren Steam Pump Company.
Two closed water-tube feed-water heaters—800 h. p. to raise 2,000 lb. of water per hour from 60 to 200° Fahr.—F. L. Patterson and Company.
One 30-gal. oil filter—Hall Manufacturing Company.

Surface.—

One 45-ft. derrick.
Two 50-ft. derricks.
Three Lidgerwood Manufacturing Company hoisting engines for derricks.
One 1-cu. yd. Smith concrete mixer and engine.
One No. 4 gyratory stone crusher—Allis-Chalmers Company.
One 8 by 12-in. Buckeye vertical engine.
[fol. 4243] One 42-in. Ingersoll-Rand air reheater.
Two 3-ton electric mine locomotives—Westinghouse Electric and Baldwin Company.

Blacksmith-Shop.—

One Ingersoll-Rand Ajax drill sharpener.
One Ingersoll-Rand furnace.
Two 36 by 36-in. air forges—Buffalo Forge Company.
Two hand forges—Buffalo Forge Company.

Machine-Shop.—

One 18-in. horizontal lathe—Niles Bement Pond Company.
One 16-in. shaper—Niles Bement Pond Company.
One 24-in. drill press—Niles Bement Pond Company.
One ¾ to 1½-in. bolt-threading machine—Wells Brothers.
One 2½ to 8-in. pipe-threading machine—Curtis and Curtis.
One power hack-saw—Frevert Machine Company.
One 12-in. emery wheel—Niles Bement Pond Company.
One 6 by 6-in. vertical engine—B. F. Sturtevant.

Carpenter-Shop.—

One 16 to 20-in. wood-frame rip-saw, 7½ to 15 h. p.—American Woodworking Machine Company.
One swing-saw.
One band-saw, 1-in. saw, 33-in. band wheels—H. B. Smith and Company.
Two Fairbanks grindstones.
One 6 by 6-in. vertical engine—B. F. Sturtevant.

Shaft Hoisting Equipment.—

One 10 by 12-in. reversible, compound-geared, elevator engine—Lidgerwood Manufacturing Company.
One 12¼ by 15-in. reversible, link-motion, single-geared, elevator engine—Lidgerwood Manufacturing Company.
One 66 by 72-in. passenger elevator cage.
Two 66 by 96-in. material elevator cages.
Four 1½-yd. shaft buckets—G. Stuebner.
Three ¾-yd. tip buckets—G. Stuebner.

Bronx Plant

Boiler-Room.—

Three 375-h. p., Babcock and Wilcox boilers—1,125 total boiler h. p.
One induced-draft fan and engine.

[fol. 4244] Engine-Room.—

Two 100-lb. pressure, Ingersoll-Rand air compressors; total capacity, 3,200 cu. ft. per min.
Two 42-in. Ingersoll-Rand after-coolers.
Two 54 by 120-in. Ingersoll-Rand air receivers.
One hot-well tank, 48-in. diameter, 96 in. high—G. Stuebner.
Two 50-kw., 200-ampere, 250-volt, General Electric generators.
Two 75-h. p. Harrisburg Foundry and Machine Company, horizontal engines.
One Walker Electric Company switch-board for 250-kw. generators.
Two 1,200-boiler h. p. Worthington boiler feed pumps.
One 250-gal. per min. Worthington duplex pump.
One surface condenser and feed-water heater combined—12,600 lb. of steam per hour—Wheeler Condenser and Engineering Company.
One vacuum oil separator and simplex pump—12,000 lb. steam per hour—Warren Webster Company and Warren Steam Pump Company.
One 30-gal. oil filter.

Surface.—

Two 50-ft derricks.
Two 8¼ by 10-in. non-reversible engines for derrick—Lidgerwood Manufacturing Company.
One 1-cu. yd. Smith concrete mixer and engine.
One 42-in. Ingersoll-Rand air reheater.
One 60-h. p. vertical boiler—Wickes Brothers.
Two 3-ton electric mine locomotives—Westinghouse and Baldwin Companies.

Shaft Hoisting Equipment.—

One 10 by 12-in., reversible, compound-geared, elevator engine—Lidgerwood Manufacturing Company.
One 12¼ by 15-in., reversible, link-motion, single-geared elevator engine—Lidgerwood Manufacturing Company.
One 66 by 72-in passenger elevator cage.
Two 66 by 96-in. material elevator cages.

Four 1½-yd. shaft buckets—G. Stuebner.
Three ¾-yd. tip buckets—G. Stuebner.

[fol. 4245] Tunnel Equipment

Rock-Drilling Equipment.—

Six Ingersoll-Rand rock drills, 2¼-in. pistons.
Thirty Ingersoll-Rand rock drills, 3¼-in. pistons.
Six Ingersoll-Rand rock drills, 3⅝-in. pistons.
Twenty-three Ingersoll-Rand hand hammer drills.
Sixteen Ingersoll-Rand 5½ by 96-in. drill columns.
Twenty-eight Ingersoll-Rand drill tripods.

Concrete Equipment.—

Two Blaw steel arch and side-wall forms.
Two " " side-wall forms.
Twelve bottom-dump buckets—G. Stuebner.

Grouting Equipment.—

Two 200-lb. pressure, Ingersoll-Rand, straight-line, air compressors.
One 500-lb. pressure, Ingersoll-Rand, straight-line, air compressors.
Two 36 by 96-in. air receivers—Logan Iron Works.

} Total capacity 900 cu. ft. per min. In Engine-room.

Two 500-lb. pressure, cast-steel, grout pans, without engines.
Eight 200-lb. pressure, grout machines and engines—Cockburn Barrow and Machine Company.

Pumping Plant.—

Two	Cameron	piston	pumps,	115	gal.	per min.
One	"	sinking	"	200	"	" "
Five	"	piston	"	330	"	" "
Nineteen	"	"	"	600	"	" "
One	"	"	"	800	"	" "
One	"	"	"	1,000	"	" "

Rolling Stock and Haulage.—

Two 8 by 10-in. endless-cable, haulage engines—Lidgerwood Manufacturing Company.
Four 5 by 6-in. single-drum, hoisting engines—Lidgerwood Manufacturing Company.
One hundred 1½ 1½-yd. wooden mine cars.
Thirty "V" steel, side-dump cars.

[fol. 4246] Ventilating Plant.—

Two 12-in. Sirocco fans with motors—American Blower Company.
One 30-in. ventilating fan and engine—B. F. Sturtevant.
One 42-in. centrifugal blower and engine—B. F. Sturtevant.

4.—Shaft Sinking

Shaft Sinking in Earth

Astoria Shaft.—The sinking of the Astoria Shaft began on September 12th, 1910. Steel sheet-piling of United States Steel Company section was used for the exterior sheeting through the earth section, for a depth of 52 ft., and was braced with 16-sided timber frames, 4 ft. apart, strapped at the joints with steel plates, to which were attached turnbuckle tie-rods extending across the shaft for use in maintaining the circular form. (Fig. 4.) The dump trestle having been constructed to circular form at a height of 15 ft. above the ground, and the excavation being removed to 8 ft. below the ground, a frame was prepared to the correct circular form, plumbed accurately below the trestle form, and served as a guide for driving the sheet-piling. The piling was cut in two lengths for the total depth, with joints staggered, and was driven with an Arnott 2,000-lb. steam pile-hammer suspended from a derrick.

Excavation was removed as the sheet-piling was driven, in order to avoid any distortion by over-driving against boulders or rock.

Having sunk the shaft to rock level, excavation was carried down into the rock about 4 ft. below the point of the piling, and concrete was placed to half the ultimate thickness for the full depth of the excavation, in order to secure

the sheet-piling and timber frames from injury during the further extension of the shaft construction.

Bronx Shaft.—At the Bronx Shaft, the shallow depth of the overlying soil and material, as well as its character, made it unnecessary to use steel sheet-piling. Wooden sheeting of 4-in. tongued and grooved stuff, supported by 12-sided timber frames, 4 ft. apart, was used through the 13 ft. of earth to rock level; the permanent lining inside this sheeting was concreted on reaching the rock floor.

Shaft Sinking in Rock

Shaft sinking in rock was carried out by the ordinary methods, the usual practice being to line up with concrete [fol. 4247] every 30 ft., as the rock was of treacherous character, and the introduction of the lining insured the employees against accidents.

For hoisting and removing the rock excavated from the shafts, and to avoid the danger of using a swinging bucket operated from the boom of a derrick, the permanent headframe, Fig. 5, to be equipped later for the use of elevator cages, was erected, with overhead hoisting sheaves and the regular elevator hoisting engines. One of these elevator wells was then fitted with guide-framing below the landing, and at the level of the landing a broad-gauge track crossed the elevator opening, with trap-doors fitted to insure safety. The spoil buckets were hoisted through this trap and landed on a flatcar run through the elevator opening before the hoisting rope was detached.

Water entered from numerous rock joints at various points in sinking the shafts, but not in such volume as to retard the progress of the work, except by the time lost in the removal by the derrick of the pumps and hose when blasting. This shaft water was readily handled in each shaft by one 350-gal. per min. steam-driven pump.

Two water rings were placed in each shaft as the sinking proceeded, in order to intercept the water seepage and prevent it from pouring on the men working below. Each ring was simply a 6-in. wooden shelf with gutter board sheathed with zinc, and a 3-in. pipe extending to the shaft bottom for drainage. Later, these leaks were stopped by grouting, while the driving of the tunnel was in progress.

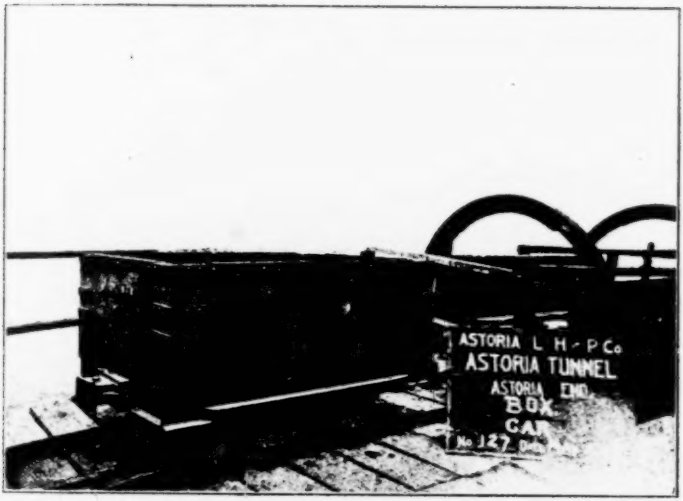


FIG. 3.—BOX CAR FOR EXCAVATION FROM ASTORIA TUNNEL.

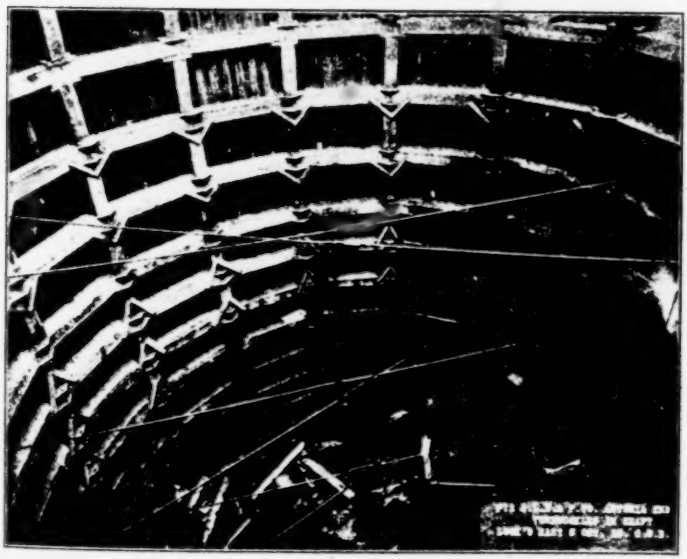


FIG. 4.—LOOKING DOWN THE ASTORIA SHAFT.

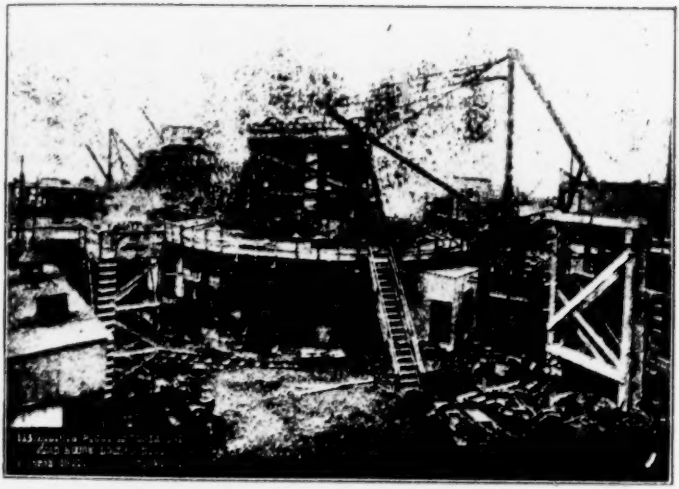


FIG. 5.—HEAD-HOUSE, ASTORIA END OF TUNNEL.

FIG. 6.—HEADING AT STATION 35 + 36.

Astoria Shaft.—At the bottom of the Astoria Shaft the design provided for an enlargement, about 41 ft. high, 34½ ft. wide, and extending some 19 ft. beyond the neat shaft lines. This was to be used ultimately as an operating chamber for the distribution of gas, but it, as well as the short length of 100 ft. of tunnel in the direction of the future Manhattan Shaft at 111th Street, was utilized, during the construction of the tunnel, as a pump chamber and store-room. This enlargement extended 16 ft. below the tunnel invert, and, in addition, contained a 5-ft. circular sump 8 ft. deep, so that ample provision was afforded for the accumulation of the expected water flows and for settling any solid matter carried with the water.

Bronx Shaft Sump.—As the tunnel drained southward toward Astoria, a similar sump was not required in the Bronx Shaft, but ample precautions were taken by the construction of a rectangular sump, 21 ft. long, 12 ft. wide, and 8½ ft. deep.

(Here follow photographs, marked side folio pages 4248 and 4249)

[fol. 4250] Quantities.—The following tabulation presents the unit quantities relating to the shaft sinking in rock:

Drilling and blasting	Astoria shaft	Bronx shaft
Feet drilled per actual cubic yard	3 9	3 3
Linear feet of drill steel used per cubic yard	0 174	0 172
Pounds of 60% Forcite used per cubic yard	1 2	1 1

Progress and Unit Costs.—Excellent progress was attained in the shaft construction at both ends. This, together with the unit costs of shaft construction, is shown in Table 1. The dimensions of the shaft are given in Table 2. The total unit costs of the shafts are given in Table 3.

Table 1—Unit Costs of Shaft Construction

	Actual cubic yards		Working days of 24 hours each		Daily average in actual cubic yards	
	Astoria shaft	Bronx shaft	Astoria shaft	Bronx shaft	Astoria shaft	Bronx shaft
Excavating earth....	2,687	367	16.8	2.9	159.7	126.6
Excavating rock.....	11,542	5,939	123.4	97.9	93.5	60.7
Placing concrete.....	3,178	1,621	37.2	23.3	85.5	69.6
Total construction.	.....	.....	177.4	124.1	.....	.....

Table 2—Dimensions of Shafts

	Astoria shaft	Bronx shaft
External diameter, earth section.....	42 ft.	30 ft.
External diameter, rock section.....	38½ ft.	28½ ft.
Internal diameter.....	34½ ft.	26 ft.
Depth	276½ ft.	242 ft.

Table 3—Unit Total Costs of Shafts

	Per actual cubic yard		Per linear foot	
	Astoria shaft	Bronx shaft	Astoria shaft	Bronx shaft
Earth excavation.....	$7.05	$2.67	$365.81	$75.39
Rock excavation.....	10.43	11.22	535.84	275.44
Concrete lining.....	14.21	13.76	163.28	92.16

[fol. 4251] 5.—Tunnel Driving under Normal Conditions

Bronx Heading.—The Bronx Shaft reached a sufficient depth for turning the heading on February 12th, 1911, and the latter was driven for a short length before completing the shaft and sump, so that tunnel driving really began on March 8th, 1911, and continued under normal conditions through sound, close-grained gneiss until August 29th, 1911. At that time the first appreciable delay occurred when the heading entered the expected contact seam of decomposed, water-bearing dolomite, 771 ft. from the shaft center, at which point the water depth in the river is 80 ft. below mean sea level, and the deep river channel corresponds in location to this dolomitic intrusion.

Astoria Heading.—At the Astoria end, work on the main tunnel did not begin until April 8th, 1911, when the headings of both the Bronx and Manhattan Tunnels were already turned. As in The Bronx, the headings were turned when the shaft reached the level of the floor of the top

heading, and prior to completing the shaft sinking; the advance toward The Bronx continued until April 23d, 1911, during which time about 80 ft. of the Manhattan Branch Tunnel were driven. Owing to the large chamber arrangements necessary at the bottom of the Astoria Shaft, work on the main tunnel was not resumed from this end until June 23d, 1911, and it continued without incident until November 7th, 1912, a distance of 3,536 ft. from the shaft center.

Geology.—For the first 1,200 ft. from Astoria the tunnel was driven through a hard, compact, and tough granite gneiss, requiring heavy drilling and large consumption of powder. For the next 2,336 ft. the tunnel passed through the dolomite, and the passage through the easterly contact between the gneiss and the dolomite was made without any apparent disturbance or shear of the geological structure, a condition quite different from the contact encountered in the Bronx heading, where the geological change was featured by violent shear, accompanied by innumerable water fissures and excessive disintegration. At a point 3,536 ft. from the Astoria Shaft, this heading met the first indications of the water-bearing disintegration of the westerly contact between the gneiss and the dolomite. (Fig. 6.) The final results developed the fact that the entire width of this decomposed contact normal to the strike was some 150 ft., whereas the angle of crossing made by the tunnel [fol. 4252] involved a total distance of 350 ft., measured on the axis of the tunnel, or 450 ft. between points of contact on the two side lines.

Excavation.—For the tunnel excavation, the top-heading-and-bench method was adopted, maintaining the bench some 50 ft. behind the heading. During the early part of the work the arch lining was not placed as the excavation advanced, these exposed sections being concreted later by using steel forms, and work was performed simultaneously with, and without hindrance to, the driving of the heading and bench. On deciding to place the arch lining along with the tunnel advance, a system of alternate excavating and concreting was adopted, with excellent results as to progress attained. This method consisted of excavating both the heading and bench from 8 a. m. Monday to 8 p. m. the following Friday, the remainder of the

6-day week (until 8 a. m. Sunday) being occupied in placing the concrete arch. By this method the maximum monthly progress was made, being 269 ft. of full tunnel section excavated and arch lined. The average progress maintained by this method was 53 ft. of heading, bench, and concrete arch per 6-day week, which, in volumetric measure, equalled 675 cu. yd. of neat-line excavation and 81 cu. yd. of neat-line concrete arch.

The average unit drilling and blasting quantities incidental to driving the tunnel 4,274 lin. ft., or 92% of the total length, under normal conditions, are presented in Table 4.

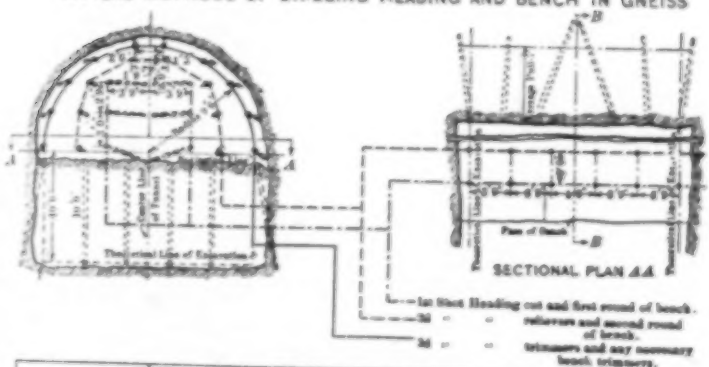
Table 4.—Average Unit Drilling and Blasting Quantities for Tunnel

	Average per actual cubic yard					
	Fordham gneiss			Stockbridge dolomite		
	Heading	Bench	Total	Heading	Bench	Total
Drilling, in feet	5 64	3 04	4 22	5 09	2 03	3 42
Pounds of powder used	4 20	1 35	2 65	4 35	1 08	2 57
Number of exploders	0 79	0 38	0 57	0 71	0 26	0 46

Overbreakage.—Notwithstanding numerous experiments in the placing of drill holes for face of heading and bench, it was found that neither the gneiss nor the dolomite rock could be blasted without great irregularity in cross-section. [fol. 4253] The large quantities of blasting gelatine needed to pull the rock caused considerable overbreakage. Careful and repeated cross-section measurements, checked by the volume of concrete used to complete the lining, indicated that, notwithstanding the particular care taken, overbreakage outside of the neat line of minimum lining section in the sound sections of good rock amounted to 18% in the gneiss and 12½% in the dolomite.

Drilling and Firing.—The typical arrangement and length of drill holes for blasting, for both heading and bench, are given in the diagram, Fig. 7, as applicable to both the gneiss and dolomite, under normal conditions. In

TYPICAL METHODS OF DRILLING HEADING AND BENCH IN GNEISS


B
Plan of Bench
B
SECTIONAL PLAN AA
1st Shot Heading cut and first round of bench.
2d " " relievers and second round of bench.
3d " " trimmers and any necessary bench trimmers.

Astoria End	Period from June 8th, 1911, to January 31th, 1912. From Sta. 1+00.7 to Sta. 16+44.8, or 1564.1 ft. Gneiss = 1270 ft. † Limestone = 294 ft. ?
Bronx End	Period from April 10th, 1911, to July 8th, 1911 From Sta. 35+05.5 to Sta. +38.50.5, or 645 ft. Gneiss = 645 ft.

Item	Astoria Heading	Bronx Heading	Astoria Bench	Bronx Bench
Strength and Size of Powder used	80% 1½-in. Forcite			
Quantity of Powder per Hole	Cut 6 Sticks Reliever 5 " Trimming 4 "		3 Sticks	
Size of Starting and Ending Bits	2-in and 1¾ in.			
Drills Used	E-46 Ing. Rand 3½-in. cylinders, Mounted on Columns. E-36 Ing. Rand-4½ in. cylinders, Mounted on Columns.		E-46 Ing. Rand. 3½-in. cylinders, Mounted on Tripods	
Average number of Drills used at one time	5		4	
Average time drilling a Complete Round Average elapsed time for removal of Round	46.1 man-hr. 15.1 hr.	36.1 man-hr. 11.3 hr.		
Average quantity of Powder per cubic yard	4.2 lb.		1.25 lb.	
Average feet of hole drilled per cubic yard	3.2 ft.	3.7 ft.		
Average feet of hole drilled per hour	3.3 ft. per man Includes setting up.	4.6 ft. per man Includes setting up.		

In Driving through Dolomitic Formation, the Heading Holes were all lengthened 1 ft.

FIG. 7.

4254

all cases holes were started with 3-in. drills, which were reduced ¼-in. in diameter with each 2-ft. advance, to a final diameter of 1¾-in. for the 12-ft. holes.

Fig. 7 also indicates graphically the arrangement of wiring, and the order of shooting the holes.

Two double-strength "Victor" fuses were always used in regular course to insure the proper explosion of charges.

All firing was done by magneto batteries maintained about 500 ft. back of the heading, the wire connections to the heading always being strung on the side of the tunnel opposite that on which electric light wires were placed.

Both for heading and bench excavation ⅜-in. steel shoveling plates were used on the floors for facilitating the mucking operations.

In the varied classes of rock throughout the tunnel headings the speed of drilling was 9.9 lin. ft. per hour per percussion machine. The bench drilling was easily maintained at the equivalent rate of progress.

Practically all the best known brands of drill steel furnished in the New York market were tried out on the work, resulting in the adoption of "ABC non-tempering" steel, which, in these rocks and under the conditions, was found more durable and showed less breakage in dressing and drilling than the others.

The average progress of excavation attained during the tunnel driving under normal conditions, consisting of 4,274 lin. ft., or 92% of the ultimate length, and, based on the advance of one heading only, is given in Table 5. In this tabulation only the total acumulative time chargeable to excavation is considered, with a 24-hour actual working day as the unit.

(Here follows diagram, marked side folio page 4254.)

[fol. 4255] Table 5.—Progress of Rock Excavation in Tunnel under Normal Conditions

	Linear feet of full tunnel section	Average daily progress: Linear feet	Average daily progress: Actual cubic yards
Fordham Gneiss:			
Astoria end	1,195	8 72	127 7
Bronx end	757	6 62	94 9
Mean	1,952	7 79	113 0
Stockbridge Dolomite:			
Astoria end, in dolomite	2,322	11 68	164 4
Mean Astoria end, in gneiss and dolomite	3,517	10 43	148 8
Mean result for both ends of tunnel, in gneiss and dolomite	4,274	9 46	135 1

Based on the results in Table 5, the average monthly (30 day) advance of completed tunnel, excavation only, was 284 lin. ft. or 4,054 actual cu. yd., in one heading.

Although the rate of progress was not as great as in other tunnels, of which reports have been published, the results obtained are thought to be very satisfactory, considering the general conditions of hoisting from a deep level, particularly as at no time was it considered by the management desirable to enter into the system of bonusing men to obtain record results. The entire work was carried out on a normal wage basis, without any attempt to offer other or special inducements to the labor to accomplish records. The progres of the work was perfectly regular and remarkably uniform, both at the Bronx and Astoria Shafts, up to the time of meeting the contact of decomposed rock at each end.

Concrete Arch.—The portion of sound rock tunnel driven from both the Bronx and Astoria Shafts was a hard, solid structure, but the rock indicated extensive jointing, with a tendency to scale away and for blocks of rock to fall without warning, a condition due to the character of the rock and also to the heavy blasting operations. Therefore what had been anticipated to be an untimbered tunnel, necessitated early the consideration either of timbering or of carrying the lining along with the tunnel operations, in order to insure the safety of the workmen. After careful

consideration of the advantages and disadvantages of these two methods, it was decided to construct the arch lining, and, on account of the original cross-section adopted, to [fol. 4256] finish this arch lining to a skewback intended for the bottom concrete in which the permanent cast-iron gas mains were to be solidly embedded; this arch lining, hanging to the arch, was supported only on the irregularly jointed section of the rock walls.

Change of Design.—From the commencement of this work it had been contemplated to embed the cast-iron gas pipes solidly and permanently in concrete, and to make a floor above them, but, after 2,867 ft. had been lined in this way, the design was reconsidered and a revision made, whereby the pipes would be left exposed and a deck would be inserted above them. The tunnel has been left completed according to this plan (Fig. 8). This obviously necessitated, subsequent to the completion of other parts of the tunnel lining, cutting out portions of the arch lining and skewback which had previously been constructed. In the remaining length of the tunnel, the arch concrete was supported by timber sills on posts, the side-walls and invert not being placed until the complete excavation of the tunnel from end to end, when the sills and posts were removed as the wall lining proceeded.

This method of procedure was peculiar, in that, for the entire job, the arch lining was first executed. Then, when the tunnel was holed through, and the steel lining, hereinafter described, was being erected in the decomposed section, the invert was put in place by trimming the rock floor, in lengths ahead of concerting and laying the invert, accurately placed side-forms. The forward end of each length of invert was laid out with a curved cross-form which gave accurately the section of the concrete to be laid; this was swept with straight-edges, using the last completed length of invert for the rear sweep and a wooden form for the forward end. The joints at the time-forms, as well as the cross-joints, were designed so as to lock thoroughly with the abutting concrete to be placed later. On the completed invert, after it had come to strength, was laid a track of 60-in. gauge, on which were operated two complete collapsible steel forms, each 50 ft. long; and these were used for the construction of the intervening side-walls, the two side-walls being concreted simultaneously.

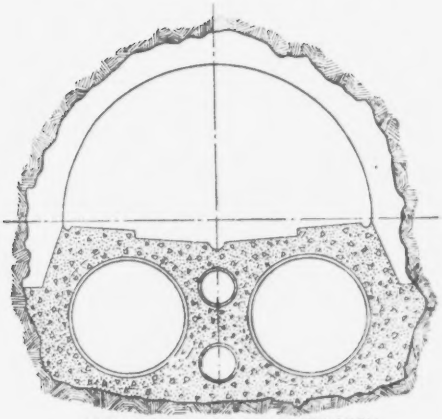
2879

These forms, Fig. 9, were set up 100 ft. apart, and were advanced 100 ft. at each move, so that each form was used for alternate lengths of side-wall lining, thus permitting the setting up of one form while the concreting was proceeding in the other; this enabled continuous working [fol. 4257] operations. Although these forms ran on the 60-in. track laid on the tunnel invert, they had on the bottom frame a standard tunnel-gauge track, with a short incline at each end, so that other operations in the tunnel could proceed by running the tunnel cars through the lower portion of the steel frame. There was an elevator at each end of each form to raise the concrete cars to the upper level, so that they could be run to any point for dumping. The collapsible feature of the steel forms was obtained by using jacks and turnbuckles, and the upper platform of the forms, which was the dumping platform, was practically at the springing line of the arch where the joint was made between the side walls and the arch already in place.

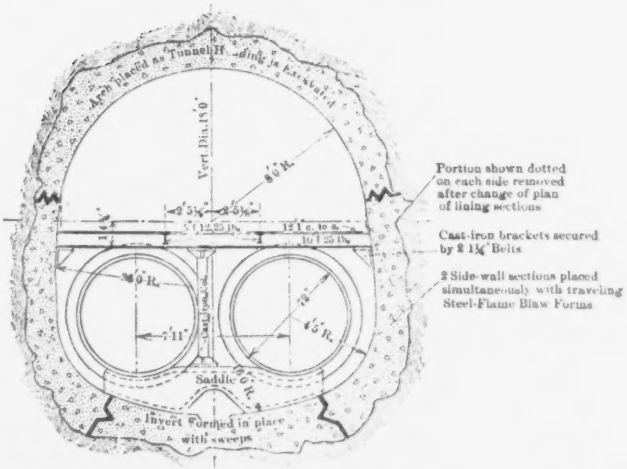
Before placing the forms the surfaces were well oiled. The moving was done by a small air-driven engine on the dumping platform. This engine was also used to operate the elevator. These forms worked admirably after they had been reconstructed, to some extent, to meet the conditions. The progress obtained with their use was one 50-ft. section each working day, and this rate was maintained with almost perfect regularity for a length of 3,310 ft of tunnel.

The proper keying of the side-wall concrete to the arch skewback was accomplished, after a number of experimental methods were tested, by forming a wooden chute at the base of the joint and to a level of about 1 ft. above it, through which wet concrete was filled in and rammed into the joint with rods, in order to work the concrete into close contact with the arch skewback and enable the air bubbles to escape. This left a projecting lump of concrete at the joint, but, just prior to moving the forms forward, these chutes were removed and the projecting concrete was chipped off to the neat lines while the concrete was still green. The results of this method were quite satisfactory.

(Here follows figure 8, marked side folio page 4258)



ARRANGEMENT OF CONCRETE ARCH
FOR ORIGINAL CROSS-SECTION


Arch placed as Tunnel is being excavated
Vert. Dia. 19'0"
80'0" R.
2'5½"
2'5½"
12-25 lb.
12-1 c. to c.
10-25 lb.
80'0" R.
7'11"
45'0" R.
Saddle
Invert Formed in place with sweeps
Portion shown dotted on each side removed after change of plan of lining sections
Cast-iron brackets secured by 2 1¼" Bolts
2 Side-wall sections placed simultaneously with traveling Steel-Flame Blaw Forms

SEQUENCE OF OPERATIONS IN PLACING CONCRETE
LINING FOR FINAL CROSS-SECTION

FIG. 8.

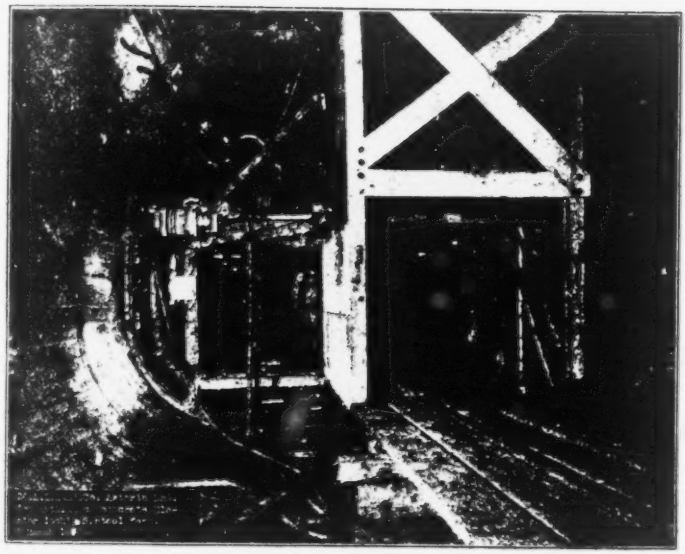


FIG. 9.—STEEL FORM FOR PLACING CONCRETE LINING.

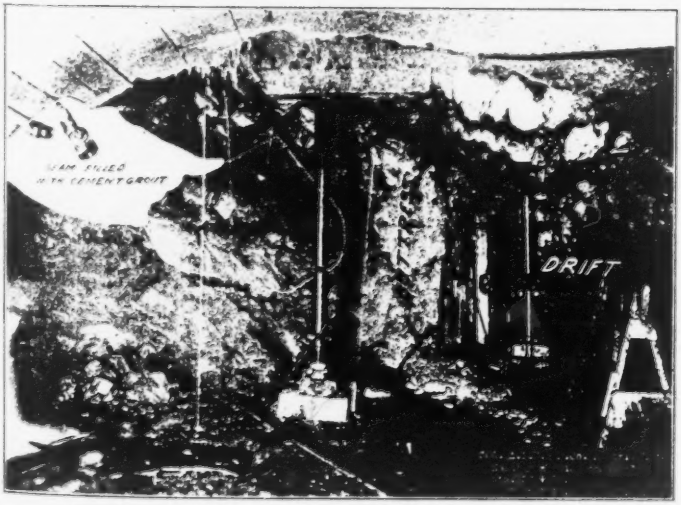
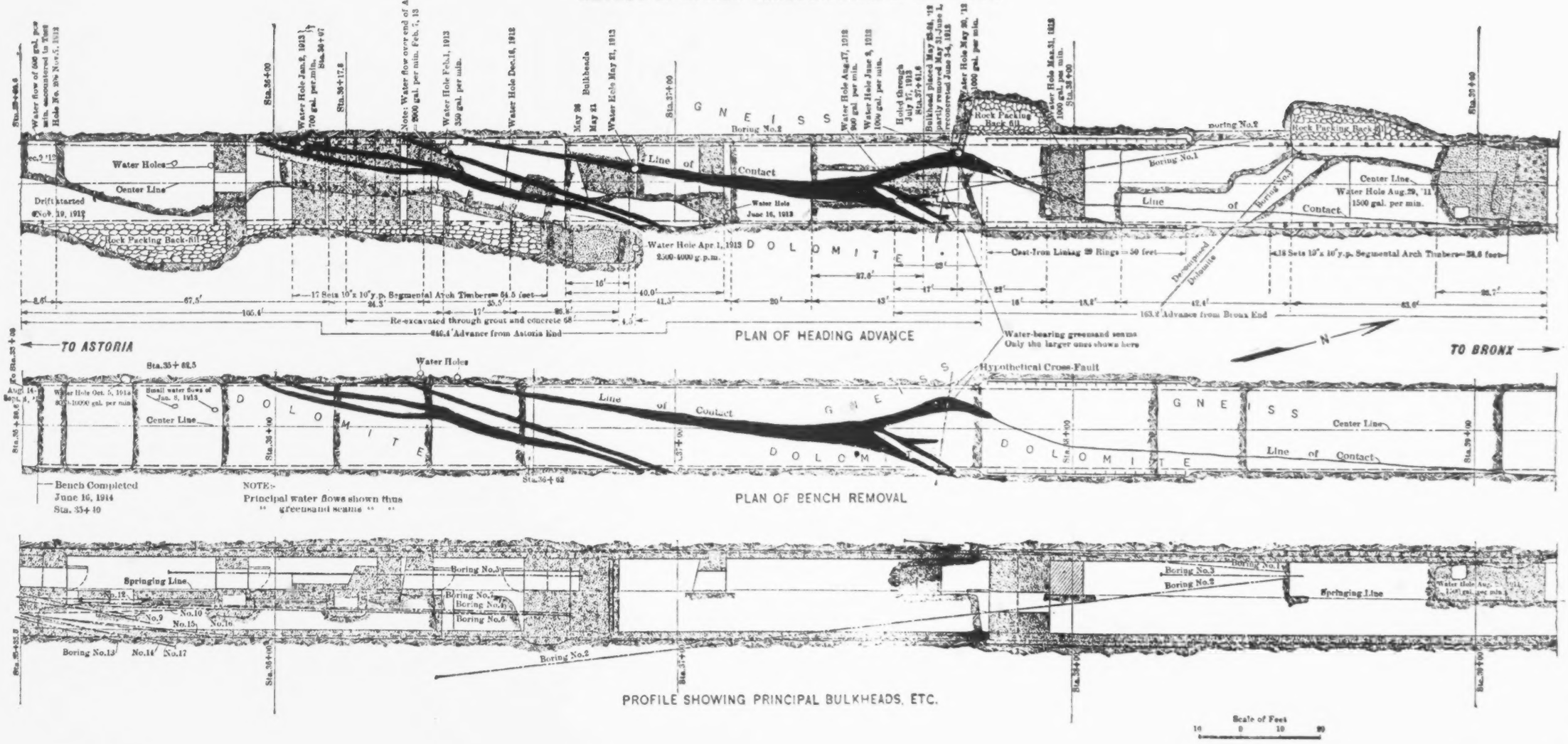


FIG. 10.—HEADING AT STATION 37 + 00, SHOWING SAND HOLE.

PLATE XXVI.
TRANS. AM. SOC. CIV. ENGRS.
VOL. LXXX, No. 1359.
DAVIES ON
THE ASTORIA TUNNEL.

METHOD OF ATTACK THROUGH ZONE OF BAD ROCK


Water flow of 600 gal. per min. encountered in Test Hole No. 2½ Nov. 5, 1913
Water Hole Jan. 2, 1913 700 gal. per min.
Note: Water flow over end of Arch 2000 gal. per min. Feb. 7, 13
Water Hole Feb. 1, 1913 350 gal. per min.
Water Hole Dec. 16, 1912
May 28
May 21
Bulkheads
Water Hole May 21, 1913
Water Hole Aug. 27, 1912 840 gal. per min.
Water Hole June 9, 1913 1000 gal. per min.
Holed through July 17, 1913
Bulkhead placed May 25-26, '13 partly removed May 31-June 1, reconcreted June 3-4, 1913
Water Hole May 20, '13 1000 gal. per min.
Water Hole Mar. 31, 1913 1000 gal. per min.
Rock Packing Back 60'
Rock Packing Back 60'
Water Holes
Center Line
Drift started Nov. 9, 1912
Rock Packing Back 60'
Water Hole Apr. 1, 1913 2,500-4000 g.p.m.
Water Hole June 16, 1913
Line of Contact
Boring No. 2
Boring No. 1
Boring No. 2
Center Line
Water Hole Aug. 29, '13 1500 gal. per min.
Line of Contact
Cast-Iron Lining 29 Rings = 50 feet
17 Sets 10"x 10" y. p. Segmental Arch Timbers = 84.5 feet
15 Sets 12"x 10" y. p. Segmental Arch Timbers = 58.6 feet
Re-excavated through grout and concrete 68
446.4' Advance from Astoria End
163.8' Advance from Bronx End
PLAN OF HEADING ADVANCE
TO ASTORIA
TO BRONX
Water-bearing greensand seams Only the larger ones shown here
Hypothetical Cross-Fault
Water Holes
Small water flows of Jan. 8, 1913
Water Hole Oct. 5, 1914 800-1000 gal. per min.
Center Line
Line of Contact
Center Line
Line of Contact
Bench Completed June 16, 1914 Sta. 33+10
NOTE:- Principal water flows shown thus
" greensand seams " "
PLAN OF BENCH REMOVAL
Springing Line
Springing Line
Boring No. 3
Boring No. 2
Boring No. 1
Boring No. 2
Boring No. 3
Boring No. 4
Boring No. 5
Boring No. 6
Boring No. 13
No. 14
No. 17
No. 9
No. 10
No. 15
No. 16
PROFILE SHOWING PRINCIPAL BULKHEADS, ETC.
Scale of Feet
10 0 10 20

Throughout the work of placing the concrete lining in the arch, side-walls, and inverts, it was considered, owing to the heavy pressures which would come on the lining by any seepage of water, that all voids between the arch section and the solid rock should be entirely filled with concrete. Plums of broken stone, however, were used freely where the concrete exceeded in thickness the neat section. Consequently, no loose packing of rock behind the arch or walls was done in any portion of the work, and, through- [fol. 4259] out the tunnel, on the completion of the entire lining from end to end, grouting was carried out by the use of grout pipes which had previously been left projecting from the lining so as to insure absolute solidity of the lining.

6.—Tunneling Under Adverse Conditions Through Decomposed Water-Bearing Dolomite

As stated previously, no evidence of any shear or disintegration was disclosed at the eastern contact between the gneiss and the dolomite; but the western contact, as encountered from the Astoria end, was featured by some 354 ft. (along the tunnel center line) of highly decomposed dolomite with a heavy flow of water. It is interesting to note that, of this 354-ft. belt, the eastern side was advanced to a farther state of decomposition than the western, the rock mass containing countless seams of decomposed material and pockets of residual clay, all so disintegrated and distorted that the cleavage planes were not distinguishable, and though the strike maintained regularity, the dip was most irregular; in fact, at numerous points it was indeterminable.

The seams were so extremely decomposed that the material consisted only of a micaceous greensand, so porous that, on exposure, water quickly formed a free passage. Usually, these seams were little better than loose sand, although at times they choked the rock seam to such an extent as to yield practically no flow of water.

(Here follow Figs. 9 and 10 and Plate XXVI, marked side folio pages 4260 and 4261)

The first contact with the decomposed rock (which was met in driving the Bronx heading) seemed to indicate the likelihood of getting through the contact without serious difficulties, as the tunnel, after careful grouting, was advanced a considerable distance in rock, which, though excessively distorted and water-bearing, had sufficient strength to carry the pressures without danger. At the same time, it was desirable to protect this heading as it advanced, and the arch was carried on heavy timbering in order to guard against falling rock. Having extended this length on timbering, it was thought that the insertion of cast-iron lining for this section might enable the work to advance successfully, particularly as the rock appeared to be getting stronger and harder beyond the first point of contact. As immediate delivery could be obtained of cast-iron segments made from the patterns from which the Pennsylvania North River Tunnel segments were constructed, a short length of 50 lin. ft. was cast, delivered, [fol. 4262] and promptly erected in this wet, water-bearing rock section. Then, inside the iron lining, concrete was inserted to the neat finished section adopted for the tunnel. This lined section remained in place in the finished work as an intermediate portion between two sections of cast-steel internal lining subsequently erected, which the following record describes.

The seams of greensand developed a maximum width of about 6 ft. at 3,750 ft. from the Astoria Shaft (Fig. 10). In this vicinity also, various pockets in the greensand seams were disclosed; one in particular being 4 ft. square and 20 ft. long, from which the previous water flows had evidently washed the sandy material.

On Plate XXIV, taken from the published Geological Survey, which presents the historical geology surrounding the Astoria Tunnel, it will be observed that there is a non-conformity in the plan defining the positions of the lines of contact as between the north and south sides of the Bronx Kills. This has been accounted for by assuming the existence of a cross-fault between Randall's Island and The Bronx, marking the course of the Bronx Kills. Although no conclusive evidence of the existence of such a cross-fault was observed during the driving of the tunnel, indications of its possible existence and proximity were

observed. The material encountered in the vicinity of the assumed cross-fault was so disintegrated and decomposed, and the conditions for observations were so unfavorable, that it is doubtful if such a fault would be readily recognized in passing through it.

It has been assumed, however, that the tunnel passed through this hypothetical cross-fault, as shown on Plate XXVI, this assumption being based on two important facts:

1.—The distortion of the line of contact; and
2.—The rock structure encountered.

(1) It is quite natural that a cross-fault should have a limit of length, so that, in the case of this particular one, though it may extend through the Bronx Kills, as assumed, it may not necessarily extend to the path of the Astoria Tunnel. Such being the case, it seems possible that the actual fault at its eastern end terminates very close to the tunnel path, and that this end, instead of consisting of an abrupt fracture, is a gradual bend or distortion of the rock mass. That such a distortion was passed through is clearly shown on Plate XXVI. This distortion of the actual line of contact between the hard micaceous gneiss [fol. 4263] on the west and the badly decomposed dolomite on the east, was encountered by an abrupt bend, 858 ft. from the center of the Bronx Shaft, and extended along the tunnel line some 70 ft. The maximum distortion was 10 ft., at a point midway along its length, at which point the hypothetical cross-fault has been assumed.

(2) The rock structure encountered at this point (893 ft. from the center of the Bronx Shaft) in addition to being extremely porous, was greatly shattered, more so than at any other point in the tunnel. The dolomite, especially, appeared like a mosaic of inlaid tile slabs, quite small (3 to 4 sq. in.), and readily removed by hand, although the individual pieces were moderately hard. It was at this place (Fig. 11) that three large water-flows burst forth at various times. One was an average single flow of 1,000 gal. per min., and in addition to this water, it carried in sediment large quantities of greensand and countless hard rock fragments. Here, too, it was necessary to terminate two heading drifts from the Bronx end. To the north of

the assumed cross-fault, the actual contact between the gneiss and dolomite consisted of a continuous small seam, ¼ in. wide, of soft brown mud, and to the south of this point the contact plane was featured by a 3 to 4-ft. seam of hard, firm, bluish-green clay.

In this section of New York City, observation has established the existence of cross-faults, one at 138th Street and St. Nicholas Avenue, and one parallel to it, south of Hell Gate, and crossing the East River north of Blackwells Island.

(Here follow Figs. 11 and 12, marked side folio page 4264.)

[fol. 4264a] Water Flows.—The water-bearing fissures in the 354 ft. of decomposed dolomite were quite numerous, sixteen appreciable streams, each averaging from 300 to 10,000 gal. per min., under a full pressure head of 95 lb., having been encountered. These flows were usually quite sudden, and were accompanied by an inrush of green sand, the maximum flow of 10,000 gal. alone washing in 400 cu. yd. of sand, coal, etc., and, during a period of 6 weeks, some 1,700 cu. yd. of sand were washed into the Astoria heading. The establishment of a direct connection to the river bed was proved by the appearance of air bubbles on the river surface during grouting operations in the headings, as well as by the quantities of coal, wood, shells, bricks, etc., washed in at various times.

Method of Attack.—On account of the great depth of the tunnel and the resultant pressure head (95 lb. per sq. in.), any compressed-air methods of attack were out of the ques-
[fol. 4265] tion, and, on account of the necessities of the gas supply, it was not desired to go to any lower level in an attempt to pass under the disintegrated bed of dolomite. It was consequently necessary to drive the tunnel at the original depth and alignment, so that the proposition presented was a difficult one.

The theory on which tunneling operations were executed through the decomposed rock formation was the thorough exploration of the formations ahead by test holes and the consolidation of the rock by grouting. It was very obvious, in working in a narrow top heading, even by drilling nu-

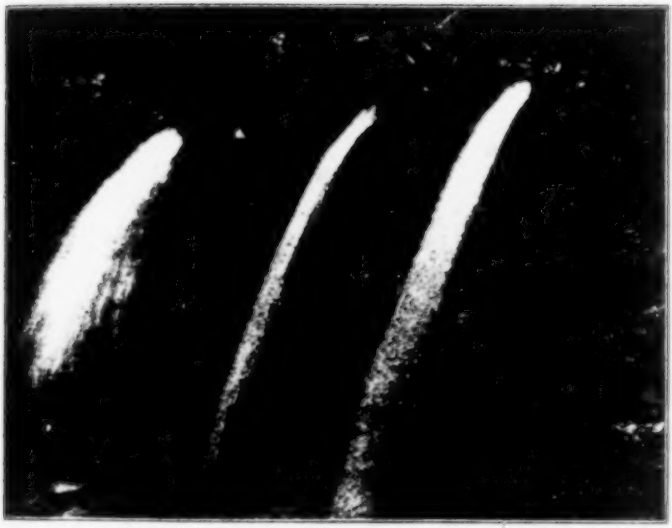


Fig. 11.—Water Flow in Drift at Station 37 + 71.

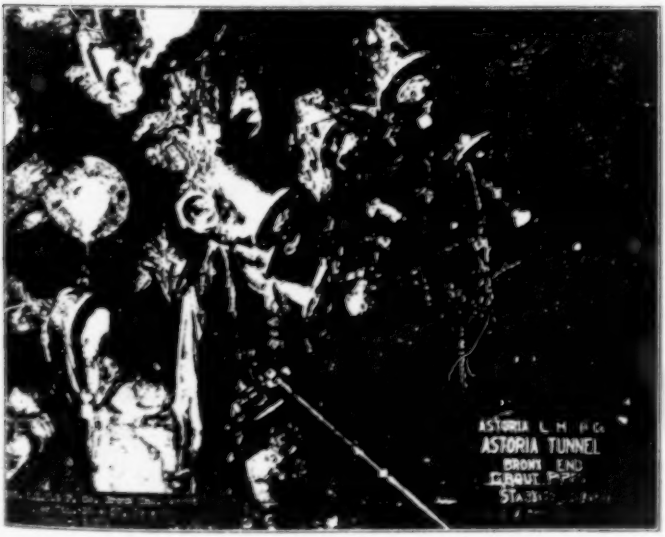


Fig. 12.—Grout Pipes, Station 38 + 55 to Station 39 + 00.

merous holes in the form of a fan, that a very limited area could be reached for consolidation, and as the percussion drill, working on more or less horizontal or dry holes, is only capable of extending to a depth of about 20 ft., the tunnel section which it is possible to consolidate is very short, particularly in view of the fact that there is a definite limit to the number of grout holes which can be drilled into the face of such a small heading (Fig. 12), and that considerable time must be allowed for cement grout to attain strength to permit of blasting safely. It was obvious, therefore, that a greater area of attack must be provided, and this was done on the theory of diverting the heading from the straight line to lines external to the final side lines of the tunnel, following the line of the strike of the sound rock as far as possible to permit of cross access to the decomposed strata. By doing this a long face could be exposed from which the drilling could proceed. Further, whenever the rock was sound and reasonably hard, a full and adequate anchorage for the grout pipes was naturally provided, but, if the rock was decomposed, seamy, and water-bearing, it was usually found to be so soft that proper anchorage could not be obtained for the grout pipes. In such cases it became necessary to construct buttress faces to the soft rock after exposure, before grout pipe holes could be drilled and pipes inserted. The work was carried out on the further theory that grouting above the extrados of the arch and outside the side-walls, within the limit of the top heading, would in all reasonable probability cut off the direct access of heavy water flow and consequent danger of breaks occurring in the bottom. This was carried out to the end of the work and proved successful, as was illustrated by the fact that it was found unnecessary to do any grouting of considerable extent in order to take out the later bench excavation, the water-bearing seams having evidently been plugged at the higher level [fol. 4266] and the resistance of the decomposed material in the seams being adequate to resist any indirect access or flow.

Reference has been made to the necessity for buttressing the face of soft rock to provide anchorage for grout pipes, in the event of the rock being unsound and not giving adequate security for the insertion of such pipes. In such

cases, owing to the high pressure involved, these concrete buttresses were allowed to set for practically two weeks on each occasion before they could be utilized.

When such buttresses were set and thoroughly hard, or when sound rock existed, the process of preparing the grout pipes for use, as indicated by Fig 13, was generally as follows:

(Here follows Fig. 13, on side folio page 4266.)

[fol. 4266a] The drilling was commenced with 6 in. percussion drills, and entered from 3 to 4 ft. deep into the concrete buttress or hard rock. A piece of 4-in. pipe, about 1 ft. longer that the depth of the hole, was then wrapped tightly with bagging and wound around with marline to secure it tightly to the pipe, the quantity of bagging being put on up to practically the dimensions of the 6-in. hole. The wrapped pipe was then inserted in the hole, and driven to its extreme end, no thread, flange, or other protector being put on the inner end of this first length of pipe. When thus inserted the wrapping was caulked back into the hole, and steel wedges were inserted and driven tightly between the 6-in. hole in the rock and the body of the 4-in. pipe. These wedges were driven so hard as to indent the 4-in. pipe and secure it rigidly. A screwed flange was then put on the outer end of this 4-in. nipple and an open gate-valve was attached to the flange, in order to provide a clear [fol. 4267] opening equal to the diameter of the pipe. Drilling then proceeded through the gate-valve, commencing with 3-in. percussion drills and telescoping if necessary, as the drilling advanced. The length of the test holes rarely exceeded 20 ft. Of course, it will be understood that where the drilling was carried out from narrow cross-headings, and the holes were drilled at an angle with the strike, the effective length was reduced on account of the lack of clearance to insert long drills.

Reference is made in the following pages to the use of the diamond drill. On first meeting the decomposed rock at the Bronx end, a 1⅞-in. diamond drill was set up in the heading and holes were driven, one at the elevation of the heading, horizontally at right angles to the strike of the

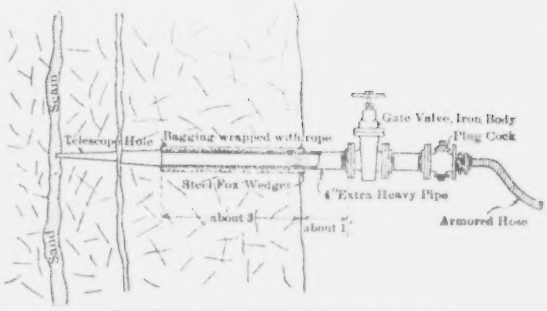


DIAGRAM ILLUSTRATING INSERTION OF GROUT PIPES IN ROCK FOR HIGH-PRESSURE GROUTING.

Fig. 13.

4266

rock, in order to intercept the seams at right angles to the general strike; and two holes straight ahead on the axis of the tunnel, one horizontally and one pointing downward. The hole at right angles to the strike of the rock was extended in only some 50 ft., but the long holes ahead were extended for about 200 ft., and these drill holes gave an excellent idea regarding the conditions to be met, as far as drilling could be accomplished with the small machine used. At a later date, a heavier diamond drill, capable of drilling 3-in. holes, was used, and gave much more satisfactory results. The use of the diamond drill for long holes was extended considerably, previous to and after the flooding of the tunnel, giving long penetration and providing a means for grouting at considerable distances. The later diamond drill outfit was of the Sullivan type, of heavy construction, and proved to be admirably adapted to work of this character. In the entire construction through this decomposed rock section, some 3,300 test holes were drilled, aggregating a length of about 43,300 ft. by percussion drills, in addition to seventeen diamond drill borings aggregating a length of 1,500 ft.

Grouting in the Astoria Tunnel has probably exceeded very greatly that in any other work executed, in consolidating soft fissured rock, and in stopping extensive and large leaks at high pressure. Grouting at a higher pressure was done on the Catskill Aqueduct, though the volume of inflow was probably very much less. In the case of the Astoria Tunnel, the grouting was a continuous operation for consolidating and cementing decomposed rock throughout the entire length of the sheared contact between the gneiss and dolomite, and as such served the purpose, a [fol. 4268] result which has not, it is thought, been approached or attempted in other work. The work involved was the conversion of a rotted and decomposed rock filled with fissures into a solid and substantial substance through which the tunnel could be driven and, incidentally, at the same time, stop the influx of water. In the grouting operations it was found to be almost impossible to grout into a seam of decomposed dolomite sand. This would apply equally to any other sand or material filling seams, which is likely to be scoured out by a flow of water. On meeting a seam filled with decomposed rock sand, the indications

on this work were, that the sand was practically impervious, but, after a short exposure to water flow, the soft rock abutting on the seam became water-loaded and softened; then the passage of small quantities of water loosened and demoralized the sand filling the seams, following which the sand was scoured out, thus forming an open water channel. Therefore, it was found particularly desirable, after drilling grout holes into a seam filled with sand, to rake the sand out with rods, as far as feasible, and then to allow these test holes to flow freely, by blowing with high-pressure air or in any other way, the idea being to get the sand to flow with the water and thus empty the seam, after which the grouting operation was much more thorough, successful, and permanent. When these seams were emptied of the sand and grouted at high pressure the result was practically a solid rock formation, and the tunnel could be built by blasting operations with security; whereas a seam not so clear of sand would resist the flow of grout and be a menace to the future advance of the tunneling operations.

Glass Tunnel Model.—In order to present clearly the actual geological information, disclosed both by direct observations and test-hole exploration, so as to determine the most advantageous direction of drift attack, an unusual method was designed by the field engineers and applied to this work. This consisted of a glass plate tunnel model. As the general strike of the rock containing the numerous seams of disintegration was nearly parallel to the tunnel line, and the dip was decidedly irregular, it was impracticable to plot the geological data on drawings and still have them clear and of working value, as they could not conveniently be superimposed. This condition was admirably simplified by this glass plate model, constructed at the tunnel works. This method of geological plotting proved [fol. 4269] quite successful, as the conditions of the explored rock structure were clearly presented at a glance, proving an important factor in the determination of the various methods of attack adopted.

This model consisted of a series of glass plates, 16 in. square, placed upright in a skeleton frame, 12 ft. long, and arranged to scale corresponding to the 5-ft. tunnel stationing. As the tunnel driving proceeded, the actual lines, drifts, bulkheads, timbers, iron rings, etc., together with the exposed disintegrated seams and the test-hole information, were all painted with oil colors on the plates, this work being always maintained up to date, so that the conditions actually existing were always visible.

Blasting was naturally performed with very light charges, necessitated by the unsound strata, as water flows were easily started, not only by the shattering of the rock in their immediate vicinity, but by the concussions from blasting in sound rock at a considerable distance from the dangerous strata. In one instance, at the Astoria end, a 50-ft. length of drift was temporarily lost by this latter condition. The caution and care with which the rock was thoroughly sounded and scaled immediately following blasting is shown by the fact that no serious injuries or fatalities occurred, which is regarded as unusual, in view of the extremely unsound condition of the rock.

Grouting.—During the early stages of adverse tunneling, the grouting of the water-bearing fissures was performed with ordinary grout machines, using a neat Portland cement mortar at a pressure varrying from 100 to 200 lb. per sq. in. This made it necessary, in September, 1911, to put in a steam-driven, straight-line booster at each plant. Grouting continued with this pressure for some months, but it became apparent as the work proceeded that an air pressure of even 200 lb. was insufficient to insure success.

For successful grouting into narrow seams it is essential to obtain a high initial velocity of grout flow, in order to overcome the frictional resistance; consequently, to grout against a water head of approximately 100 lb. per sq. in., more than 100 lb. additional pressure was found to be necessary. The increase of the starting pressure insured the initial flow, and the expansion of the air, even down to 200 lb. or less, was adequate to maintain the continuity of the flow. The use of the high pressure also insured that [fol. 4270] the seam would be packed more tightly and that the grout would be more dense when it had taken its ultimate set and attained strength.

Consequently, an additional steam-driven straight-line booster was erected at the Astoria end in November, 1912, this machine being capable of developing an air pressure of 500 lb. per sq. in., for which special grout machines were constructed. The injection of cement into the water-bearing

fissures at this pressure (500 lb.) was exceptionally effective, and was undoubtedly a valuable factor in the ultimate success in driving through the unsound water-bearing rock.

The disintegrated rock structure (Fig. 14) frequently necessitated the construction of concrete wall buttresses, in order to withstand the high grouting pressures used, and considerable difficulty was experienced during the early stages of the work in preventing the injected cement from washing out of the water-bearing crevices. Unsuccessful efforts were made to prevent this by mixing oats and bran with the cement mortar, as used in other subaqueous tunnels.

Another method introduced, which proved of great benefit and aided in securing the injected cement, consisted of the addition of a handful of fine-cut cotton waste to each batch of grout, which by fibrous reinforcement of the cement held it in place while it was setting. During lengthy grouting periods, two machines were used alternately in series, thereby maintaining a continuous injected flow.

(Here follow Figs. 14 and 15, marked side folio page 4271)

The special machines for grouting with 500 lb. air pressure were designed and assembled at the tunnel works. The general arrangement and capacity were identical with the riveted pans for 200 lb. pressure, with the exception of some details designed to resist the higher pressure. The entire pan and the cover were made of cast steel, carefully annealed and tested, and having no joints other than that of the cover. The heads were made in convex form; one end was cast in one piece with the body, and the other was a cast-steel removable cover with male and female bolted flanged joints. In operation these pans were very reliable, and, when required, one pan was operated 25 hours without a stop, and discharged 4,500 bags of cement at pressures varying from 350 to 500 lb. Extra heavy 2-in. screwed pipe was used for the transmission of the high-pressure air from the engine room to the heading, with the exception of the first 600 ft., where extra heavy 4-in. pipe was used to give greater storage capacity. Special 1-in. hose was used to make the connection between the air line and the grout

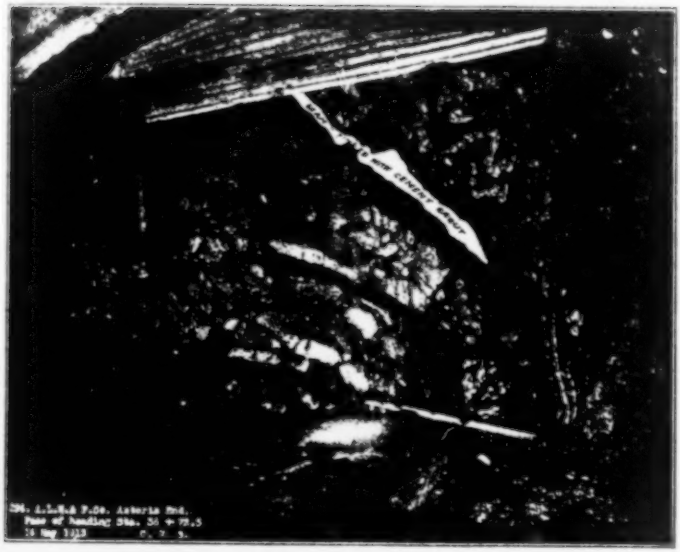


FIG. 14.—FACE OF HEADING AT STATION 36 + 72.5.

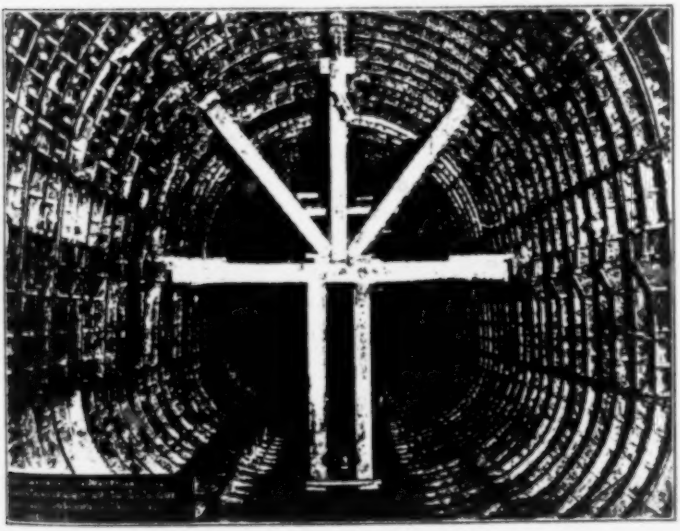


FIG. 15.—TIMBER BRACING BETWEEN BULKHEADS.

[fol. 4272] pan. This was a 6-ply rubber and canvas hose, with a marline woven cover, would with 3/16-in., half-round, steel wire, 4 10-in. pitch. Knox standard couplings were fitted to each end. A special 2 in. grout hose was used, this also being of 6-ply rubber and canvas, would with 3/16-in., half-round wire, 1/2-in. pitch.

Bulkheads.—Prior to entering the belt of disintegration at each end, adequate precaution was taken to guard against flooding, by the construction of full tunnel section emergency bulkheads, well back from the point of attack. As the headings proceeded, additional emergency bulkheads were built as close to the heading as the work permitted. These were to the heading size only, as the bench was not removed through this soft ground section until after the meeting of the headings.

The first emergency bulkhead of full tunnel section, built at the Bronx end, was of a concrete buttress type, fitted with two guillotine doors and not reinforced. A guillotine type of door was considered in the first design to be the most certain in action. The clear openings of these doors were about 5 ft. square, of such size as to permit a tunnel car to pass through. These doors were never actually closed or used, but in constructing later doors it was considered preferable to adopt a simpler form of top-hinged flap, so that, in case of necessity, by cutting away the wire rope supports, they would drop readily into position, this type being not only cheaper to build but simpler in operation, and throughout the remainder of the work such doors were used. Some of the full tunnel section bulkheads, as well as the emergency bulkheads, were reinforced and some were not, the design being modified for each individual case. These doors were used only occasionally, and, as hereinafter stated, gave excellent results in operation. Owing to the necessity for knowing that these doors were always in working order, and for trying them out from time to time, they were equipped on the outer side with tripping devices and rams operated by compressed air from the tunnel line for raising them when they were desired to be opened. Valve arrangements were provided so that the door could be operated from inside or outside; thus, in the event of any one being accidentally left on the

wrong side, it was possible for him to open the door and release himself.

Numerous solid heading and wall buttresses were constructed from time to time, for the reasons previously [fol. 4273] stated. This concreting, of course, necessitated frequent and unusual delays, the accumulated lost time incurred by this work accounting for at least 50% of the time required to tunnel the 354 ft. of unsound rock, as generally from 10 to 14 days were allowed for the concrete to set sufficiently for 500 lbs. grouting pressure.

During the bench removal, after holing through the headings, full section tunnel emergency bulkheads were necessary, these being generally about 14 ft. thick. As the bench excavation proceeded, these bulkheads were kept fairly close to the point of work, in order to facilitate transportation. The continual construction of heavy timber runways was necessitated by the fact that it was desirable to place the emergency bulkhead doors well above the invert, in order to prevent them from becoming clogged by the sandy sediment in the flowing water. Drainage through the bulkheads was provided by 6 and 8 in. pipes, passing below the doorways, but at a sufficient height from the bottom to prevent them from being clogged by the sand. These drains were equipped on the shaft side with standard gate-valves to permit of their being closed.

Bench Excavation.—After the meeting of the headings, on July 17, 1913, efforts were concentrated on the removal of the remaining bench, which, at that time, amounted to 474 lin. ft. This length of excavation was attacked simultaneously from the Astoria and Bronx sides. In the first 237 ft. on the Astoria side only good sound dolomite was encountered, no trouble was experienced, and the immediate lining of this excavation was not necessary. On the Bronx side the lower west portion of the bench face consisted of hard sound gneiss with intrusions of clay at its contact with the dolomite on the east. The dolomite was both porous and disintegrated, but no serious difficulties were encountered, although it was essential to place the concrete lining immediately after each short advance of excavation.

In this bench excavation the advance was thoroughly explored with long test holes ranging well outside the neces-

sary excavation lines, and the material was displaced by light blasting. This arrangement was due, not only to the character of the rock, but on account of the existence of the overlying concrete arch.

The work proceeded in this matter until exploratory test holes disclosed the presence of excessive water at the Astoria side of the remaining bench. This water was located [fol. 4274] by four test holes, 3 ft. apart, along the west side of the bench top. The nearest hole was 24 ft. from the bench face, and the total flow at high pressure was about 1,500 gal. per min. These holes were piped for grouting, and encased in an inclined concrete buttress, 20 ft. long and extending from the arch haunch to the rock bench.

The water was allowed to flow freely through these holes for one week, while the concrete buttress was attaining strength. The valves of the drains through the inclined buttress were then closed in preparation for grouting, and water broke through the top of the bench at the toe of the buttress. It was then decided to place a full-section emergency bulkhead at each end of this remaining 122-ft. section of bench, so that any water that might overcome working operations could be confined between the bulkheads.

On the completion of these emergency bulkheads, on September 16th, the work of preparing to consolidate the rock previous to excavation was resumed. The inclined buttress was removed and a much heavier and more massive one was constructed. This extended along 34 ft. of the bench top from the recently constructed emergency bulkhead on the Astoria side, was about 6 ft. high and 12 ft. thick, and was completed on September 25th.

At the same time, the western side of the bench top, at the Bronx side, was covered with a 23-ft. length of inclined buttress against the concrete arch and extending from the recently constructed Bronx emergency bulkhead to a heading emergency bulkhead on top of the bench placed during the driving of the Astoria heading. A similar inclined buttress, 13 ft. long, was placed against the west side of the arch. Thus, the entire 122 ft. of exposed bench was covered on the west side by a series of concrete bulkheads and buttresses.

After allowing these structures to set until October 1st, grouting through them into the rock fissures began, and 139 bags of cement were successfully injected into the last two mentioned buttresses. The grouting of the massive 34-ft. buttress was not successful, as the reactive pressure developed by the closing of the drain valves fractured this concrete structure very badly and rendered it useless for the purpose for which it was intended.

It was then decided to remove this fractured buttress entirely and replace it with one in the form of an inverted arch, and of more massive proportions, the inverted arch [fol. 4275] to react against the permanent roof arch already in place. In the removal of this buttress blasting was done with extremely light charges, and every care was taken not to disturb the underlying rock bench. The removal of this buttress was completed about 8 a. m., on Sunday, October 5th, 1913.

7.—Flooding of Tunnel

Shortly after 8 a. m. a large flow of water, carrying greensand, burst forth under high pressure from the top of the rock bench about 15 ft. from the Astoria emergency bulkhead. After flowing 30 min. the flow abruptly ceased, only to burst forth again a few minutes later with renewed vigor, yielding a volume of approximately 10,000 gal. per min., which eventually overcame the capacity of the pumps at the Astoria end. The bulkhead doors were promptly closed. On the Bronx side the force of the water was broken by the intervening heading bulkhead still in place, and the workmen were able to close the drains; but, on the Astoria side, owing to the rush of water and sand, they were able to close only two of the three drain valves in the bulkhead. It was found later that a small piece of 1-in. board, floating in the water had become wedged between the door and the door frame of the bulkhead on the Astoria side. Through the small opening thus caused, and through the drain pipe which the men had been unable to close, the water poured into the tunnel, carrying with it a large volume of dolomitic sand and débris. The water in the Astoria Shaft rose steadily until, at 3:15 p. m., it had completely submerged the pumps, which soon thereafter ceased working, and the water reached tidal elevation at

8.15 p. m., on Monday, October 6th. At this time the pumping plant at the Astoria Shaft consisted of 12 pumps with a rated capacity of 7,500 gal. per min., but, on account of the sandy water continually handled, it had previously been found that the actual discharges were about 70% of the rated capacity; thus the actual capacity probably did not exceed 5,500 gal. per min.

Immediately following the flooding of the Astoria end, the Bronx emergency bulkhead was strengthened as a further measure of safety by a reinforced central buttress. On the completion of this buttress, an additional emergency bulkhead was built about 105 ft. nearer the Bronx Shaft. The actual need of this bulkhead never arose, as the first one withstood the full hydrostatic pressure, but it was desired to take every possible precaution against the [fol. 4276] flooding of the remaining protected tunnel, as the unwatering of an entirely flooded tunnel would have been a much more difficult and costly proposition.

It was also considered advisable to increase immediately the Bronx pumping plant, which at this time consisted of five pumps with a rated capacity of 2,250 gal. per min., of which only 1,200 gal. capacity was available for shaft discharge to the surface, the remainder handling the drainage from the bench face to the shaft, as the grade at the Bronx end was away from the shaft. Four additional pumps, each having a capacity of 600 gal. per min., were put in, by which the capacity of the tunnel drainage to the shaft was increased to 1,650 gal. per min.; and the surface discharge capacity was raised to 3,000 gal. per min. This plant was fully capable of handling all the subsequent water from the Bronx end.

8.—Recovery of Tunnel

Observations of the rise of water in the Astoria Shaft were carefully made, and also the tidal readings during the continuance of the shaft inundation. It was observed that the water rose and fell with the tide, but that the entire tidal rise was not obtained, the rise in the shaft being only about one-half that in the river. From the continuance of these conditions, and also from the flow obtained through small pipes in the Bronx bulkhead, it was apparent that the

water flow had not choked itself as had been hoped. After due consideration of various methods of attack, it was decided to grout from the Bronx end into the water-filled chamber between the Astoria and Bronx bulkheads, with the object of filling this with cement to the extent of permitting the unwatering of the tunnel from the Astoria end. At the same time diamond drill borings were to be driven from the Bronx bulkhead, the purpose of which was to intercept the fissure at a point beyond its opening into the tunnel, carefully calculated and directed to the desired point, and through this to inject cement, in an effort to seal the source of flow beyond the tunnel. The first hole drilled was intended to tap the fissure at a point 5 ft. below and 5 ft. beyond the point of flow into the tunnel, this location being determined by a close study of the geological formation previously encountered. This hole measured 120 ft. from the bulkhead face to the point. The accuracy of both the location and pointing of this hole was conclusively proved, not only by the injection of 870 bags of cement, but [fol. 1277] by the conditions disclosed when driving through this section in February, 1914. The grout in this instance was evidently well directed into the fissure, but naturally followed the line of least resistance, going no farther than the débris in the fissure would permit.

The second step in the programme of attack was to fill completely the space between the completed arch and the rock bench between the bulkheads, and began by drilling through the Bronx bulkhead and the small disused heading bulkhead with a diamond drill, using a packing tube fitted with an exterior valve inserted in the bulkhead, through which the diamond drill rods were threaded and operated. These drill rods were pushed into the chamber as near as possible to the fissure location. Grouting through this diamond drill tube began at 3 p. m., on November 10th, and continued without interruption until 4 p. m., on November 12th, during which time 8,580 bags of cement were injected at a pressure of 400 lb. per sq. in. The drill head, fitted with its diamonds, was recovered later from the mass of cement grout during the subsequent excavation. The grouting was discontinued on the appearance of cement in the seepage around the Bronx bulkhead door.

From the action of the water in the Astoria Shaft, it was quite evident that this grouting had been effective in seal-

ing, to a large degree, the direct passage and subsequent leak between the tunnel and the river, but had not entirely sealed the leak through the Astoria bulkhead, as the draining of water through numerous small pipes in the Bronx bulkhead lowered the water in the Astoria Shaft some 17 ft. This water receding in the Astoria Shaft, and its subsequent loss of pressure head, resulted in an unequal condition of pressures on the freshly injected grout in the fissure, so that, when an absolute pressure of 11 lb. existed on the fresh grout, from the drop in the Astoria shaft water, the grout gave way, causing the water from the fissure to flow again into the tunnel, and the shaft water to rise.

Meanwhile, the long tubing was kept free, both inside and outside, and was withdrawn for this purpose to within 7 ft. of the inner bulk-head wall. It was again pushed forward in the early morning of November 14th, and 775 bags of cement were injected. Later the same morning, 622 bags were injected, followed in the afternoon by 986 bags. On the following morning 316 bags were injected, when the pressure gauge on a pipe extending through the bulk-[fol. 4278] head began to jump in excess of the hydrostatic pressure, and, as grout began to appear through the bulkhead pipes, the operations were discontinued. Again, however, on November 17th, an additional 164 bags were injected through this tube, making a total of 11,342 bags of cement.

Meanwhile, the diamond drill borings had been continued, and, although water and greensand were encountered, only a small quantity of cement could be injected. It was evident, later, on removing this piece of bench, that the fissure in question was pierced only by the first drill hole. By opening the various pipes in the Bronx bulkhead, in order to test the hydrostatic pressure and to ascertain the effect of the grouting, it was found that they gave water, but without pressure, and, therefore, it was considered quite safe to commence immediately the unwatering of the tunnel from the Astoria end.

The consideration of the various possible alternative methods for unwatering the tunnel contemplated in every case the ability to hold the Bronx tunnel intact up to the emergency bulkhead, and the method adopted and subse-

quently carried out was based on that understanding. However, it was also considered as a possibility that this method might not prove successful in stopping the open leak from the river so as to enable a battery of pumps, which could be practically erected, to control the flow. As the heading had been entirely carried through and the test borings had defined quite clearly the position of the seams, it was thought that, if the plan of drilling with diamond drills, as previously described, and grouting through the diamond drill holes, did not prove successful, another alternative would still remain, by which a steel trestle could be erected over the tunnel on the bed of the river and from the deck of such a trestle, above high-tide level, numerous drill holes could be accurately placed and extended vertically to intercept the line of the seam, and through such drill holes grouting could be executed at any pressure desired, which would be amply adequate to fill the seam and plug it effectively. Fortunately, this last expedient was not found necessary.

Unwatering.—Existing in the Astoria shaft prior to the flooding were an 18-in. ventilating pipe (extending from the surface, down the shaft, and into the tunnel a distance of 970 ft.), and three 8-in. discharge lines (extending from the pumps at the foot of the shaft to the surface). These four pipes were converted into a pneumatic water-lift system by placing a 3-in. air pipe inside the 18-in. ventilating [fol. 4279] pipe, extending the former to a depth of 251 ft. below the ground surface, or a depth of 240 ft. below mean sea level, and by placing a 2-in. air pipe inside each of the 8-in. lines to the same depth. The discharge ends of these air lines, for some 24 in. in length, were perforated with small holes drilled at an angle of 45°, so that the air discharge would point upward. These air lifts all discharged at the shaft surface. This emergency equipment was the only means used to lower the water 176 ft. from the top of the shaft, and down to that depth, proved both rapid and effective.

During the operations at the Bronx end, an emergency plant had been secured and prepared for operation at the Astoria Shaft. This consisted of six Cameron reciprocating pumps (one of 1,000, one of 800, and four of 600 gal. per min., a combined rated capacity of 4,200 gal. per min.). On a steel pontoon, designed and constructed specially for

the purpose, and floating in the shaft, were placed the two emergency pumps (of 1,000 and 800 gal. per min.) with the discharge connected to an 8-in. discharge line in the shaft. Three 600-gal. pumps were placed in the elevator wells after the water had been lowered 172 ft. below mean sea level. These pumps were lowered from time to time as the water dropped, and, when it had been lowered to a level of 13½ ft. above the tunnel invert at the shaft, the submerged permanent pumps were brought into play.

The 18-in. and two of the 8-in. air lifts were operated continuously from 8 a. m. to 9 p. m., on November 24th, when the water had been lowered a depth of 160 ft., displacing 1,147,028 gal. of water in 797 min., or an average discharge of 1,439 gal. per min. The two pumps on the pontoon were then started and worked continuously until 6 a. m., on November 25th, with a net gain of 15 ft. The three pumps in the cage well were then operated, it being necessary to change the pipe-line connections quite frequently. On November 30th, at 10.40 a. m., the water had been lowered to a level 13½ ft. above the tunnel invert at the shaft portal. During the progress of this stage of the pumping, in order to avoid a column of water forming at the Astoria bulkhead and a consequent probable regurgitation of the water in the shaft, air under pressure was forced into the tunnel through a 2-in. pipe, which was in place and extended from the surface about 3,200 ft. into the tunnel. At 10.40 a. m., on November 30th, the original shaft pumps were started, and, as this gave in all a battery [fol. 4280] of eleven pumps, the water was quickly drained from the tunnel. During the period occupied in pumping at the Astoria end, a 2-in. and a 5-in. pipe in the Bronx bulkhead were kept flowing, and materially aided in the unwatering. Table 6 is a summary of the water pumped and the time occupied.

Table 6.—Summary of Water Pumped, etc.

Air Lifts—Astoria End:	
Time worked	13 hours 17 min.
Volume of shaft unwatered	1,147,028 gal.
Average per minute	1,439 gal.

Pumps—Astoria End:

Time worked	162 hours 53 min.
Volume of shaft and tunnel unwatered	8,415,353 gal.
Leakage into tunnel	15,608,873 gal.
Total water pumped	24,024,231 gal.
Average per minute	2,458 gal.

Average Leakage into Tunnel Through the Fissure During the Period of Unwatering:

Flow through pipes, Bronx Bulkhead	938 gal. per min.
Leakage through Astoria bulkhead	997 " " "
Average leakage through fissure	1,935 " " "
Period of unwatering approximately 25,000,000 gal	7⅓ days.

On Sunday evening, November 30th, with the water 4½ ft. below the crown of the arch at the portal, two boats containing the tunnel engineers entered the tunnel and continued on a tour of inspection to the Astorial bulkhead. It was found that comparatively little damage had been done by the flooding, although a considerable quantity of grout and sand had entered the tunnel through the door which, in the inception of the flood, was not securely closed, and through the 8-in. drain which the men had been unable to close, as previously mentioned. Sand deposits occurred at frequent intervals throughout the first 2,300 ft., and beyond this a layer of sand, mud, coal, shells, etc., covered the tunnel invert, accumulating in quantity toward the bulkhead. At a distance of 3,000 ft. from the shaft, the grout, with a small proportion of sand, formed a bank 12 in. deep, gradually sloping up to the bulkhead, a length of about 500 ft., where it was 12 ft. thick, or nearly to the top of the bulkhead doorway. The surface of this grout bank was in a plastic condition, some 6 in. deep, the underlying material being firm and semi-hard, the hardness increasing toward the bulkhead. This material was not well set-up grout by any means, the subsequent removal being performed with pick and shovel. From the 8-in. drain clear water, at the rate of 900 gal. per min., was flowing, and from a 3-in. cable conduit pipe in the bulkhead there was a stream of 100 gal.

[fol. 4281] per min.—neither being under pressure. The air throughout the tunnel was exceptionally good.

The construction of an emergency bulkhead about 60 ft. from the closed bulkhead was immediately commenced, before making any attempt to remove the aforesaid grout bank, as the appearance and condition of the grout bank material were such as to cause very grave doubt that the leak would remain confined. A small trench was excavated in the grout bank around the bulkhead drains; the two closed ones were blind-flanged and the open one was allowed to flow, in order to prevent the development of any additional pressure on the bulkhead.

Simultaneously with the construction of the emergency bulkhead, the cleaning and righting of the tunnel proceeded. Meanwhile, the emergency pumps were erected at the shaft bottom and the original pumps were overhauled. When this work was completed the Astoria plant consisted of fifteen pumps, with a combined rated capacity of 9,600 gal. per min., which was considered quite sufficient to handle any likely flow, in view of the existence of an additional bulkhead removed from the point of danger.

The method of procedure adopted for completely sealing the water flow of October 5th consisted in driving a series of long test holes, in an effort to pierce the fissure well outside of the tunnel lines, through which the effective seal and solidification of the rock mass would be obtained by injecting grout. The short holes were drilled with percussion drills and the long ones with diamond drill equipment through the tunnel side-walls close to the bulkhead, as it was desired not to disturb the latter in any way. The direction of these holes was based on the assumption that the water-bearing fissure would be encountered in a plane produced along the line of the general strike of the rock and passing through the ends of the holes by which the presence of the fissure was first determined prior to the flood. The first hole drilled with a percussion drill to the computed depth, encountered water at full pressure at a depth of 22 ft.; the success of this hole was very encouraging, as it had been computed that water would be encountered at 21½ ft.

The observation of results attained in grouting was accomplished by the attachment of pressure gauges on both

the Astoria and Bronx bulkheads and by allowing the pipes in the Bronx end to remain flowing. Grouting began at 1 p. m. on December 18th, and was followed immediately by [fol. 4282] the appearance of grout in the flowing Bronx pipes, thus indicating that the point of injection communicated to the water hole of October 5th, and that the latter was still unsealed. At 9 p. m. on December 19th, after the injection of 3,360 bags of cement, the hole finally refused.

It was quite apparent that the recent grouting had been effective, but, during the time interval necessary to allow this to set thoroughly, it was decided to make a thorough investigation of the underlying rock before attempting to open up the grout-filled chamber between the bulkheads. This investigation proceeded during the remainder of December, and consisted of drilling ten long diamond drill holes, the result being that, though the rock structure outside the tunnel lines was found to be extremely disintegrated, no water was encountered—a favorable indication of the success of the recent grouting.

On January 5th, 1914, the work of removing the grout fill between the bulkheads commenced. A small drift was driven through the Astoria bulkhead, after which the door was raised and immediately placed in working order. The removal of the grout fill was then resumed, this work proceeding with very light blasting, toward the Bronx bulkhead door, which was raised on January 15th, 1914, and preparations were made for resuming the bench excavation—after a delay of 102 days, caused by the flooding of the tunnel.

In removing the grout fill, it was found to be in an unusual condition and stratification. Certain layers were extremely hard, and others were equally soft; some sections were highly stratified—others quite massive; some layers and masses of what might be described as solidified "laitance" were found, which never attained a greater hardness than that of the softest chalk, and having a curious chemical composition, entirely different from that of the original Portland cement from which it had been produced. Layers of sand also extended through the mass, and, in the vicinity of the water-hole, a 4-ft. blanket of coal, sand, shells, bits of wood, etc., was disclosed. No indications of water were apparent, other than the usual normal seepage through the concrete lining.

Several interesting conditions were encountered during the recovery of the flooded tunnel. Although large quantities of sand, coal, bits of wood, etc., were found, having been washed into the tunnel, and thus establishing proof of a direct connection with the river bed, no signs of any [fol. 4283] fish were observed, though during previous heading flows many live fish, up to 8 in. in length, were washed in.

Of unusual interest is the fact that, though the sum total of cement injected from both ends, from the time of the flood to the completion of the grouting, was only 595 cu. yd., about 1,150 cu. yd. of solid grout were removed, in addition to 400 cu. yd. of sand, shells, coal, etc., to say nothing of the quantity of cement grout which remained in and filled the fissures themselves. A possible explanation of this is that in some manner the injected cement had mixed freely with very fine-grained decomposed dolomite, probably in sediment in the water, and that cement in the form of grout does not act as normal Portland cement in maintaining constant volume.

A peculiar disclosure was made on uncovering the end of the long grouting tube inserted from the Bronx end. The end of this tube was solidly embedded in a 12-in. cube of extremely hard grout, entirely surrounded by a 4-ft. layer of sand, coal, shells, etc., thus isolated from the bulk of the grout in the chamber between the bulkheads. Apparently, with each injection, the cement scoured away and was forced through this sand layer, which then resumed its normal form after each discharge.

In view of the recent flooding, it was resolved to exercise even greater precautions than heretofore. After careful consideration, a method of attack was devised which ultimately proved quite successful. This consisted of: (a) the construction of an inverted concrete arch over the remaining length of bench between bulkheads; (b) an even more thorough exploration of the underlying rocks with test holes as long as could be drilled by percussion drills; (c) the injection of cement through these holes in an effort to solidify the rock mass—the inverted arch acting as a resistance to this grouting; (d) the careful excavation of the exposed rock by very light blasting of small sections only; and (e) the immediate concreting of the tunnel lining on completing a short length of full section excavation.

The inverted arch was 24 in. thick and 8½ ft. below the concrete tunnel arch on the center line. As this working space did not permit of drilling to the tunnel invert extrados, the exploration was accomplished by first testing to a depth of from 5 to 6 ft. below the inverted arch. Drilling pits were then excavated and concrete-lined as an inverted arch, well bonded into the tunnel arch and the in- [fol. 4284] verted arch slab. Test drilling was then continued from these pits, thus reaching well outside of the necessary lines of excavation.

In removing this 122 ft. of bench, the entire rock encountered was extremely wet, and, although two flows of fair volume occurred, no unusual difficulties were experienced. This was undoubtedly due to the numerous injections of grout, which had been quite effective in consolidating the disintegrated rock structure. On uncovering the water-hole of October 5th, it was found to be a greensand seam, 24 in. wide, and of unknown depth, filled with sand, coal, shells, etc., through which a 9-in. layer of hard grout extended. No water was flowing, nor was there any further trouble from this fissure.

9—Steel Lining

Following the completion of the bench excavation, the erection of the cast-steel ring lining began. The installation of this lining was to secure impermeability through some 400 ft. of wet rock section extending on each side of the existing 50-ft. length of cast-iron rings. Being an after consideration, it was of necessity devised for its adaptability to the existing conditions. In contrast to the 50-ft. section of iron lined tunnel, the rock structure of the zone lined with steel rings was of such poor quality, and so treacherous and shattered, that it would have been extremely hazardous to increase the area of excavation necessary for the insertion of circular rings. Therefore, it was desired to maintain as small an excavated section as possible, and this resulted in the adoption of a metal lining of special design.

The usual assumption in designing a metal lining for subaqueous tunnel construction is that it is surrounded by a more or less plastic medium, and that no inward collapse

can occur at any point without an outward distortion taking place at other points on the periphery; usually, the most suitable section to meet these conditions is a circular one. In this case, however, the tunnel being deeply embedded in rock and of a horse-shoe section, there were certain assumptions which could not be made in the case of a tunnel surrounded by soft material without cohesion. That is to say, the assumption on which the tunnel lining was designed was that, on the completion of the work, the spaces between the metal lining and the rock would be solidly filled with concrete or cement grout, which, when [fol. 4285] placed, would support the entire metal lining and prevent any possibility of an outward distortion of the lining, the latter being designed with sufficient strength to prevent any inward collapse.

However, partly on account of the hydrostatic pressure, and partly on account of the departture from a true circular form, such stresses were produced in the metal that, without an extraordinarily wasteful design, cast iron could not be considered as a feasible material for withstanding the resultant pressures, and it appeared, therefore, to be necessary to substitute cast steel.

The cast-steel segments used for this purpose were made by the Wheeling Mold and Foundry Company, in accordance with the specifications of the American Society for Testing Materials. The segments were machined on all flanges to exact templates, so that all segments of the same letter were interchangeable. The facing of all joints of the steel segmental plates was laid out from the templates, which at the same time, defined exactly the position of coupling bolt holes were drilled in the plate castings. Although the specifications permitted the use of cored bolt-holes, no such coring was used on account of the impossibility of obtaining the accurate fitting of segments with the irregularities which would have thereby been caused, the specifications requiring that this absolute accuracy of segment form in its relation to the bolt centers should be maintained.

This cast-steel lining, Fig. 16, was of segmental form, shaped to the mean lines of the tunnel, with the extrados 7 in. beyond these lines. As the flange depth of the rings was 6 in., and it was not desired to increase this depth at the expense of cutting away more of the exterior concrete lin-

ing, there was an allowance of only 1 in. of concrete over the ring flanges in covering the lower segments up to the springing line of the arch, being simply a protection against possible corrosion and to produce a continuously fair and smooth surface for the interior of the tunnel.

(Here follows Fig. 16, marked side folio page 4286)

Each ring consisted of eleven segments, including the key; all joints were accurately machined. The key was placed at the top, and the joints were not staggered, as is the custom with circular iron tunnel rings. The rings were 24⅛ in. wide, this odd width being designed on the assumption that a slight excess in the gauge length of each ring would be probable, and that in erection a growth or creep of ¼ in. [fol. 4287] to every six rings would occur. Actually, the machining was executed with almost perfect accuracy, and in erection no creep resulted throughout the entire length of 4081 ft. Each segment, excepting the key, was provided with a tapped hole for grouting behind the rings, and each ring was equipped with brackets cast on the side plates, to carry a transverse 10-in., 40-lb., beam., for the support of the permanent tunnel runway, and also to act as an additional strut to react against any possible horizontal distortion of the rings.

In consideration of the possible danger of causing serious water flows by the removal of the concrete lining necessary for the erection of the steel lining, it was decided to perform this trimming without the use of blasting but by taking off the necessary 9 in. by bullpointing with small air-driven jack-hammers. For this same reason, a special method of procedure in erecting the steel was adopted. This consisted in erecting the 200 rings in four sections, by which arrangement, and the construction of two emergency bulkheads, the point of work was always protected, so that any unusual flows could readily be confined to a comparatively small length of tunnel.

Previous to the erection of the internal steel lining, the rock tunnel had been secured by a concrete lining, at no point less than 18 in. thickness, which concrete was adequate,

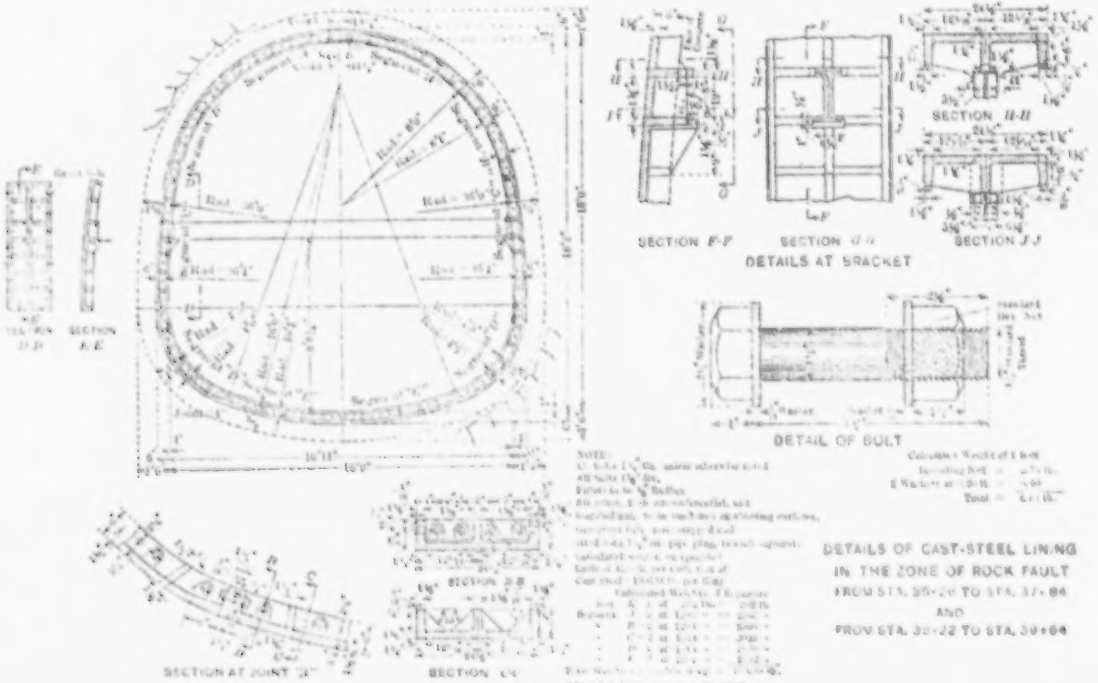

SECTION F-F
SECTION G-G
SECTION H-H
SECTION J-J
DETAILS AT BRACKET
DETAIL OF BOLT
SECTION AT JOINT A
SECTION C-C
SECTION B-B
DETAILS OF CAST-STEEL LINING
IN THE ZONE OF ROCK FAULT
FROM STA. 35+20 TO STA. 37+84
AND
FROM STA. 38+22 TO STA. 39+84

FIG. 16.

as long as it remained in perfect condition, to take all the hydrostatic pressure strains At the same time, the concrete was not impervious, and as water would pass through it into contact with the steel lining, it would obviously transmit hydrostatic pressure to that lining. Simultaneously with the excavation of the rock bench, the exterior concrete lining was put in, but, as the arch concrete had previously been placed to the finished tunnel lines during the driving of the headings, it was necessary to chip the entire inside surface to provide space in which to erect the steel lining to the true lines called for. Consequently, there was a very small space remaining between the intrados of the concrete lining and the extrados of the steel lining. It was of vital importance, on account of the accurate machining to templates, that the rings should be erected absolutely true to the axis, and the only way in which this could be done without any question of doubt was by erecting with absolute accuracy a long stretch of the bottom plates, bolted up and laid out instrumentally to perfect alignment and grade. In order to do this, the bottom plates throughout were laid [fol. 4288] on a cradle consisting of three longitudinal strips of bar steel, 4 in. wide and ½ in. thick. These cradle bars were wedged up to proper alignment and grade, and secured by spiking with countersunk expansion bolts to the exterior concrete lining already in place. On this cradle were erected the two bottom segmental plates. The first short length of complete section lining, about 100 ft., was erected continuously on the bottom plates already set on the cradle, and each plate as erected was wedged with oak wedges to exterior concrete lining already in place. The ends of this section were carefully secured by cementing, grouting, and packing, in order to maintain them rigidly and to plug the narrow spaces at each end, the theory then being to proceed with the grouting by leaving all grout holes open and pouring grout into each one in succession, and as each hole indicated free flow of grout, to close each plug in its turn. It was thought that the plate lining, being held securely by hardwood wedges at each plate and the setting of the cement as grouting proceeded, would enable this section of steel to retain its form. Experience, however, showed that the hardwood wedges were inadequate to resist deformation in consequence of the pressures due to the flotation, and quite

a serious distortion occurred in this section during the grouting operation, necessitating the entire removal of the section and its re-erection on the plan adopted later, as follows:

The rings were erected on the iron strip cradle previously described, on which the bottom plates for several ring lengths were first placed, followed by the same length of smaller radius side-wall plates. The remainder of each ring was then erected separately, this work being done by an erector. This method was adopted to prevent any divergence from alignment, as no special rings were provided to correct alignment deviation. The space behind each segmental joint was securely blocked with iron wedging to prevent distortion during the subsequent grouting operations. The method of grouting behind the rings consisted of forming a circumferential bulkhead of cement mortar behind two complete rings consisting of one whole and two half rings, spaced at a distance of five rings apart, and a longitudinal bulkhead behind the smaller radius side-wall plates, thus permitting grouting behind the rings in stages. This was essential to prevent distortion due to the weight of cement and the flotation of the tunnel. To in- [fol. 4289] sure further against the possibility of distortion, the five-ring section between bulkheads was internally braced with heavy timbering (Fig. 15). Only one set of timbers was used, grouting operations being carried along in the rear of the erection at the same rate of progress in each. By this arrangement the five-ring sections were completely grouted before the removal of the timbering, the grouting being performed in three operations: first, the lower half above the longitudinal bulkhead; second, the upper half (thus keying in the top portion); and, third, the bottom plates. The first operation was with an air pressure of 30 lb.; the second and third were with 135 lb.

The rings were grommetted and caulked on the completion of the grouting. In grommetting, which was carried on immediately in advance of the caulking, each bolt was wrapped with strands of hemp, not coated with any waterproofing substance, as is usually the practice, as it was determined by experiment that the results derived from pitch-dipped hemp were not better than with the uncoated strands. In caulking the ring joints, small air-driven caulk-

ing hammers were used, the procedure consisting simply of turning over the metal edges of the joint, in every respect as though caulking a boiler. In unusually wet places lead wire was used to stop the flow temporarily until the edges were turned. This 400 ft. of steel lined tunnel is now practically water-tight, although occasional drops are caused by the natural sweating of the metal. This in time will probably gradually dry up and disappear entirely, due to the corrosion of the metal and the silting in of fine particles of matter.

10.—Drainage

The completion of the tunnel with the entire lining left a seepage of water to be taken care of by the permanent drainage and the pumpage of 280 gal. per min., this seepage coming in from the entire length of the tunnel and the two shafts, including the enlargement at the foot of the Astoria Shaft. Consequently, this leakage was yielded by the equivalent of some 5,600 ft. of full-sized tunnel, or a surface area of approximately 36,000 sq. yd. This inflow for the most part finds its entry through the jointing of the rock in the hardest portions of the granitic gneiss, including the Astoria Shaft and the tunnel extending from that shaft to [fol. 4290] the dolomite rock contact. The softer dolomite is, for all practical purposes, perfectly dry, and there is practically no water finding entry through the section lined with steel plates. The remainder of the inflow originates in the similar hard gneiss constituting the Bronx Shaft, and the section of the tunnel between the bulkhead line of the East River and the westerly contact.

The writer has invariably found that, so far as water flow through the rocks in the vicinity of New York is concerned, the greatest leakage is in the hardest rocks, and that wherever the mica schist or dolomite rocks exist, their softer character closes the joints and fissures to such an extent as to make these rocks practically water-tight.

Considerable efforts were spent on grouting through the lining to lessen the leakage from these hard rocks, including the drilling of long holes through the lining to intercept the minute joints and fissures, into which was forced cement grout under pressures of from 200 to 300 lb. per sq. in. For a time this would prove effective, but, within a few days

after stopping the inflow, under these conditions, it would almost invariably be found that water would work its way through other channels, with the final result that the grouting of the rocks had little effect on the total quantity of water. There are indications, however, that in the course of time a great many of these minute fissures will choke themselves by the washing in of particles of solid matter to fill the crevices, a condition confirmed by observation of other tunnels.

11.—Ventilation

The proper ventilation of the tunnel during the construction period was obtained with electrically-driven suction fans—one operated on the surface at each plant—capable of furnishing 2,500 cu. ft. of air per min. at a pressure of 5.4 oz. Each fan was at the top of each shaft, and was connected by a 12-in. inlet to an 18-in. pipe extended down the shaft and along the tunnel wall to within 200 ft. of the bench, sections being added as the advance proceeded. The fans were not operated continuously, but only until proper ventilation was secured after each blasting operation. On the Astoria side a 30-in. blower, driven by a compressed-air engine, was erected in the tunnel 1,700 ft. from the shaft, as the 12-in. fan was not efficient beyond this length. This blower was connected to the existing 18-in. [fol. 4291] line from the 12-in. fan, the fan being discontinued when the blower was put in operation. In tunneling through the zone of decomposed dolomite, the construction of bulkheads close to the point of work in the heading naturally interfered with proper fresh air circulation, and at times the inflowing water carried with it sludge tar which had probably been discharged many years previously from adjacent gas-works and had been lying on the bed of the river in deep holes. This material gave off fumes which were unpleasant and caused a burning sensation in the eyes, but at no time during the work was there any illness or inconvenience attributable to improper ventilation.

12.—Lighting

The tunnel was lighted electrically by current supplied at each plant by two direct-current generators, each of 250 volts, 200 amperes, and 50 kw. These were operated alter-

nately, except at the Astoria end, where it was necessary to operate both generators at night after the tunnel had been driven 1,000 ft.

Lamps of 16 c. p. were used while in the heading and bench. Luminous-arc headlights were carried along with the advance, the result being very satisfactory, as these lamps gave a bright whitish light, quite essential through the dark, wet, rock sections, and especially in driving through some dense, black gneiss encountered. After entering the decomposed, water-bearing zone, kerosene hand-lanterns were used throughout the tunnel as a measure of safety, and were kept lighted at all times in case of emergency.

13.—Triangulation and Alignment

The triangulation system of the Astoria Tunnel was first laid out in 1903-04, and conformed with the intentions at that time of constructing the tunnel to 111th Street, Manhattan. Subsequently, this triangulation system, with the necessary modifications, was adopted for the alignment of the present Astoria Tunnel.

The triangulation system of the present tunnel consisted of three scalene triangles constructed on an 1,800-ft. base line on the Astoria short, with a 1,300-ft. check base on the Bronx shore, one angle point being on the extreme northerly end of the "Sunken Meadows" in the East River. The accuracy of the triangulation work was proved by the fact that the computed length of the Bronx base checked to within 0.006 ft. of the measured length, or 1 in 218,000.

[fol. 4292] The alignment was transferred down the shafts of the tunnel with suspended plumb lines which were aligned by direct sight across the river between shafts, triangulation towers being provided for this purpose. Some little difficulty was caused by the oscillation of the wires due to eddying air currents and the water seepage down the shaft sides, these conditions necessitating the use of 35-lb. wing weights. At the Astoria Shaft the base between the suspended wires was 28 ft.; in the smaller Bronx Shaft, the base was only 21 ft.

In the extension of the tunnel center line, all fixed points were placed in the concrete arch—those in the Astoria heading were at 300-ft. intervals, but in the Bronx heading a

maximum of only 200 ft. could be used, on account of the continual fog. As the headings approached the water-bearing rock section, it was found necessary to reduce the sight lengths considerably, especially after the construction of bulkheads, as the fog then became, in a sense, confined. All instrument work was performed from suspended transit tables and scaffolds, thus preventing any delays to, or confusion between, the engineering and construction forces.

Accurate elevations were determined from a bench-mark on the northern shore of the Bronx Kills opposite Randalls Island. The reference of this bench-mark to a mean-sea-level datum plane was supplied to the tunnel engineers by the United States Coast and Geodetic Survey, being based on the result of 6 years of tidal observations at Sandy Hook, N. J. The location of this bench-mark necessitated a level run of 3,900 ft. to the Bronx Shaft and a run of 14,000 ft. to the Astoria Shaft, the latter route crossing Randalls and Wards Island to reach the point of minimum width of the East Channel of the East River. Thus, the length of the combined transfer of elevations of 3½ miles on the surface to the point of closure in the tunnel was approximately 4½ miles, in view of which the error of only ⅛ in. is quite remarkable.

In consideration of the unfavorable conditions under which the underground work was necessarily performed, the meeting of the alignment and grades of the two headings is regarded as most satisfactory. As mentioned, when the tunnel entered the water-bearing rock, there was considerable difficulty in obtaining even fairly distinct sights, as there was a continual fog caused by the condensation of the air exhaust from the drills, pumps, and grout pans. [fol. 4293] The alignment, which was carried 3,900 ft. from the Astoria Shaft and 762 ft. from the Bronx Shaft, met to within 1¼ in. for line, ⅛ in. for grade, and ½ in. for stationing.

14.—Quantities and Costs

Table 7 is a summation of the quantities incidental to the shaft and tunnel construction.

Table 7.—Summation of Quantities

Earth excavation, for erecting plant	1,750	cu. yd.
Earth excavation, shafts	3,050	"
Earth excavation, total	4,800	"
Rock excavation, shafts	17,480	"
Rock excavation, tunnel	70,140	"
Rock excavation, total	87,620	"
Concrete removal, tunnel	4,080	"
Grout bank removal, tunnel	1,150	"
Summary of excavation—each, rock, concrete, etc.	97,650	"
Concrete, plant foundations	1,160	"
Concrete, shaft lining	5,070	"
Concrete, tunnel	26,860	"
Concrete, tunnel bulkheads	2,070	"
Concrete, pipe foundations	710	"
Summary of concrete placed	35,870	"
Lining rings, 20 cast-iron, 50 lin. ft.	27½	tons*
Lining rings, 200 cast-steel, 400 lin. ft.	1,365	"
Lining rings, total, 220 rings, 450 lin. ft.	1,592½	"
Cement, concrete plant foundations	6,870	bags
Cement, concrete lining, shafts and tunnel	199,000	"
Cement, concrete bulkheads	16,160	"
Cement, concrete pipe foundations	4,590	"
Cement, total in concrete	226,620	"
Cement, grouted in shaft lining	1,200	"
Cement, grouted in tunnel concrete lining	45,340	"
Cement, grouted in metal lining	14,380	"
Cement, grouted in bulkheads	26,510	"
Cement, grouted in test holes	28,550	"
Cement, grouted in pipe supports	2,000	"
Cement, total in grout	117,980	"
Cement, total in concrete and grout	341,600	"

*Tons of 2,000 lb.

In this undertaking the cost of construction must be classed in two accounts: first, the cost of the shafts and tunnel constructed under normal conditions in the two types of rock formation; and, second, the extraordinary cost and expense of that portion of tunnel, approximately 400 lin. ft., constructed in the decomposed rock formation. The cost of the permanent pipes and interior equipment is an additional and entirely distinct item of expense, bearing no direct relation to the cost of the structure of the tunnel.

It is worthy of note that the unit costs, based on all work of a normal character, with the sole exception of the great expense of getting through the decomposed rock, was less than the originally estimated figures contemplated at the [fol. 4294] commencement of the work. The unusual conditions involved in that portion of the tunnel driven through the decomposed rock formation, and the long delay in conquering the difficulties which arose, involved an actual cost for that section materially greater than had originally been allowed.

Tables 8 and 9, showing the distributed unit costs for the shaft and normal tunnel constructions, are of interest and value, and show advantageous results under the conditions governing the work. The unit costs given in these tables are the totals for both labor and material, allowing 60% of the purchase value of plant and equipment—the remainder being considered as a credit for ultimate salvage. The item "Contingencies" includes all expenses chargeable to accidents, damages, hospital, rentals, insurance, and operation of the ferry-boat used between the shafts.

Table 8—Unit Costs of Shaft Construction—Normal Conditions

Items	Cost per actual cubic yard			
	Rock excavation (gneiss)		Concrete lining	
	Astoria shaft	Bronx shaft	Astoria shaft	Bronx shaft
General supervision	$0.114	$0.120	$0.130	$0.120
Engineering expense	0.193	0.204	0.221	0.205
Field office administration	0.808	0.853	0.922	0.855
Plant and equipment, installation and maintenance	0.346	0.365	0.396	0.366
Plant and equipment, 60% of purchase value	0.867	0.915	0.990	0.917
General surface labor and supplies	0.354	0.373	0.451	0.375

Items	Cost per actual cubic yard			
	Rock excavation (gneiss)		Concrete lining	
	Astoria shaft	Bronx shaft	Astoria shaft	Bronx shaft
Drilling and blasting	1.971	1.571	1.083	1.283
Mucking	1.652	1.797	.....	.....
Disposal, surface transportation	0.484	1.502	.....	.....
Disposal, scow line and towing	0.149	0.101	.....	.....
Power and plant running	1.625	1.343	.....	.....
Making and sharpening steels, and repairing machines	0.420	0.376	.....	.....
Lighting	0.157	0.171	0.134	0.161
Extending lines (air pumps, etc.)	0.173	0.124	0.100	0.098
Pumping	0.301	0.439	0.234	0.207
Contingencies	0.817	0.879	1.113	1.078
Forms and platforms, making, setting and removing	.....	.....	2.389	1.902
Use and waste of lumber	.....	.....	0.300	0.294
Handling materials	.....	.....	0.519	0.341
Sand	.....	.....	0.264	0.424
Cement	.....	.....	1.898	1.897
Stone	.....	.....	0.836	0.806
Mixing concrete	.....	.....	0.784	0.779
Transportation	.....	.....	0.055	0.060
Placing concrete	.....	.....	1.342	1.050
Cleaning up	.....	.....	0.045	0.091
Totals	$10.431	$11.223	$14.206	$13.759

[fol. 4295] Table 9—Unit Costs of Tunnel Construction—Normal Conditions

Items	Cost per actual cubic yard		
	Rock excavation		Concrete lining
	Gneiss	Dolomite	
General supervision	$0.087	$0.089	$0.064
Engineering expense	0.151	0.121	0.127
Field office administration	0.629	0.503	0.464
Plant and equipment, installation and maintenance	0.283	0.226	0.209
Plant and equipment, 60% of purchase value	0.662	0.529	0.488
General surface labor and supplies	0.327	0.261	0.326
Drilling and blasting	1.997	1.672	.....
Timbering	0.005	0.001	.....
Mucking	1.736	1.213	.....
Disposal, tunnel and surface transportation	0.795	0.748	.....
Disposal, scow line and towing	0.279	0.249	.....
Power and plant running	1.262	1.055	1.256
Making and sharpening steels, and repairing machines	0.285	0.306	.....
Lighting	0.158	0.152	0.183
Extending lines	0.139	0.142	0.161
Pumping	0.152	0.116	0.147
Contingencies	0.761	0.626	0.984

Items	Cost per actual cubic yard		
	Rock excavation		Concrete lining
	Gneiss	Dolomite	
Wood forms, making, setting and removing	.....	.....	0.857
Steel forms, making, setting and removing	.....	.....	0.125
Steel forms, charges	.....	.....	0.353
Use and waste of lumber	.....	.....	0.187
Handling materials	.....	.....	0.332
Sand	.....	.....	0.323
Cement	.....	.....	1.918
Stone	.....	.....	0.891
Mixing concrete	.....	.....	0.487
Transportation	.....	.....	1.702
Placing concrete	.....	.....	1.709
Cleaning up	.....	.....	0.279
Totals	$9.708	$7.989	$12.563

15.—Cast-Iron Pipes in the Tunnel

The cast-iron pipes in the tunnel from Astoria to The Bronx are the largest ever made. Their internal diameter is 72 in.; the thickness of metal in the pipe walls is $2^3/_4$ in.; they have hub and spigot joints, and were cast in standard 12-ft. lengths. The weight of each pipe is 26,000 lb., and the displacement of water by each length represents some 24,800 lb., from which it is seen that, even should the tunnel be allowed to fill with water, the pipes would retain their position secure.

(Here follow Figs. 17 and 18, marked side folio page 4296)

These mains are arranged in two parallel lines occupying the lower portion of the tunnel, and are supported on concrete bed-blocks. The structural steel runway, Fig. 17, for supporting any future utilities that may be put in, extends through the tunnel and is just above the mains. The concrete blocks are 6 ft. apart, each block supporting [fol. 4297] both lines of pipe. Each 12-ft. length of pipe is supported by two blocks, and the joints of the two pipe lines are staggered. Every second block supports a cast-iron column which braces the center of the transverse runway beams, the actual support for the runway being provided by cast-iron brackets anchored to the concrete tunnel walls.

FIG. 17.—TUNNEL RUNWAY THROUGH CAST-STEEL RING SECTION.

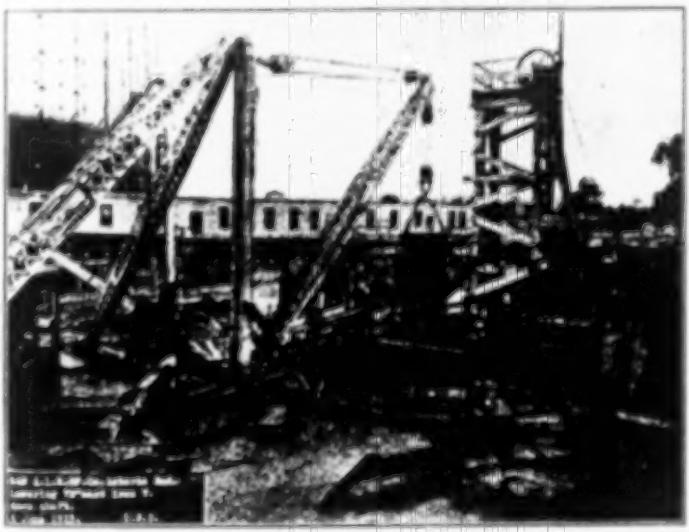


FIG. 18.—LOWERING 72-IN. CAST-IRON T DOWN SHAFT.

In both shafts the two 72-in. pipe lines are connected to the tunnel lines by double-spigot eccentric reducers and bell-spigot bell tees. All the vertical risers are 12 feet long, with both the spigots and bells machined on the face to take the true bearing of the vertical pressure loads. At the top of each shaft flanged spigot tees, reducing to 48 in. diameter, connect to 48-in. pipes through the shaft lining into concrete valve pits, thence passing underground—in Astoria to the gas holders, and in The Bronx to the street feeder lines. Each shaft is equipped with an elevator and an emergency ladder, the elevator framing also acting as a bracing for the pipe lines. The tunnel runway extends to the elevator landing at the bottom of each shaft, and in the Astoria Shaft there is an operating floor in the enlargement.

During the driving of the tunnel, arrangements proceeded for putting in the permanent piping, and consisted of unloading and storing the pipe and structural steel, casting the concrete pipe bedblocks, setting bolts in the tunnel side-walls for the support of the tunnel runway, and the design and construction of additional plant equipment necessary in laying the pipe.

The pipes, excepting those for the Bronx Shaft, were stored at the Astoria plant, as the required space was available there and as it was also the intention to lay them from the Astoria side, this shaft affording the larger working area. The concrete blocks were cast on the surface at the Astoria plant, the work being completed fully a year before the pipe-laying commenced, so as to insure the maximum strength. Collapsible wooden moulds were used, and the mix was a rich gravel concrete, as it was desired to secure a thoroughly sound block. The blocks contained reinforcing rods, bolts for securing the runway columns, and small pipe holes to which the slugs were attached when lowering into the tunnel. As the saddles were long and of irregular shape, the reinforcing rods were necessary to prevent fracture due to their dead load when lifted by the derrick.

The permanent bracket bolts for the support of the tunnel runway are 12 ft. apart, and there are two bolts at each [fol. 4298] bracket; but, as it was intended to use a traveling crane, running on steel girders secured to the tunnel

walls, for which two bolts were insufficient, advantage was taken of the necessity of the permanent bracket bolts and the crane track design arranged to utilize those bolts. This resulted in placing four bolts at each bracket location. The bolts were 1¼ in. in diameter, 24 in. long, and were secured 18 in. in the concrete side-walls.

In laying out the bracket holes, the marking points were permanently secured, each consisting of a small nail driven into a wooden plug set in the concrete walls of the tunnel; thus the points were preserved until a year later, when they were used for spacing and grading the pipes. This simplified the necessary field engineering during the laying of the mains, and was a decided factor in the excellent progress attained.

The principal additions to the plant equipment, incidental to the laying of the 72-in. mains, consisted of a 50-ton steel derrick and engine, a traveling crane, and two pipe-testing machines.

The steel derrick for handling the 72-in. mains, Fig. 18, had a 50-ft. boom and a 35-ft mast. Power was supplied by a steam-driven engine, having a 10-in. cylinder and a 13-in. stroke. The swinging gear was operated independently by a rotary engine. The hoisting rope was a six-part line of ¾-in special wire cable, and the boom fall was a twelve-part line of ¾-in wire cable. In operating this engine, the load was lowered by throwing the clutch into gear and allowing the engine to run backward, instead of throwing on the brakes, as the friction burned up the wooden brake bands too rapidly. This method was considerably safer, and gave better control, than by lowering with a brake. Special slings were constructed for handling one pipe and two saddles together.

(Here follow Figs. 19, 20, and 21, marked 4299 and 4300)

The traveling crane, Figs. 19, 20, and 21—designed by Mr. Hodgson for handling and erecting the pipe within the tunnel—was constructed on a wood frame fitted with cast-steel wheels running on steel girders attached to the concrete tunnel walls by the 1¼-in. bolts previously mentioned. The wheel base of the crane was the same as the bracket

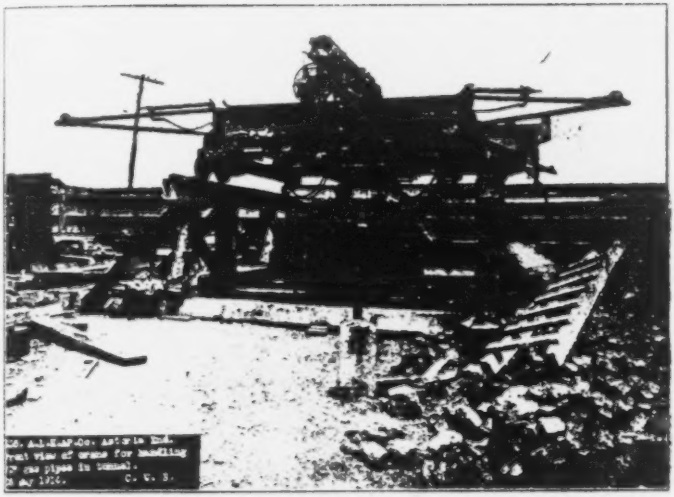


FIG. 19.—CRANE FOR HANDLING 72-IN. CAST-IRON PIPES IN TUNNEL.

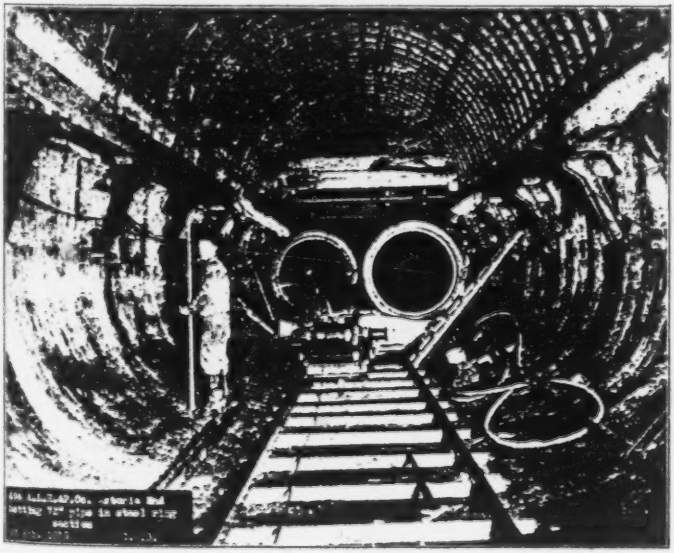
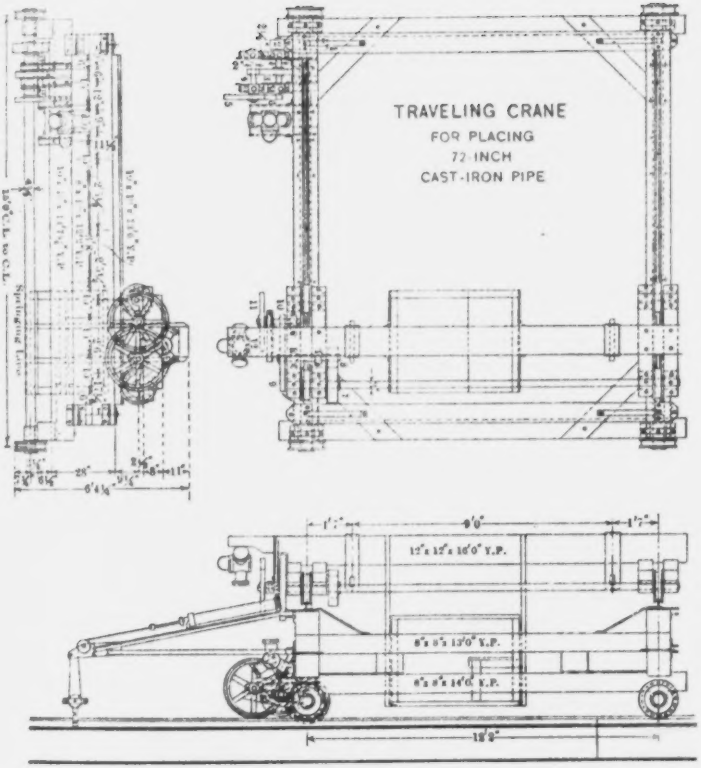


FIG. 20.—SETTING 72-IN. PIPE IN STEEL RING SECTION OF TUNNEL.



DIMENSIONS OF GEAR WHEELS

Marked	Pitch diameter	Pitch	Number of Teeth	Width of Face	Diameter of Hole	Size of Key way	Material	Hub
1	17.180"	1¼" Circular	48	4"	4 23/64"	⅜"	C.I.	6¼"
2	6.200"	1¼" "	13	4"	2¼"	⅜"	Steel	4"
3	17.180"	1" "	54	2½"	2¼"	"	C.I.	3"
4	5.093"	1" "	16	2½"	2"	¼"	Steel	"
5	24"	6" Diametral	90	1½"	2"	"	C.I.	"
6	4"	6" "	16	2"	1 15/16"	⅜"	Steel	2"
7	14.483"	1¼ Circular	38	4"	2 25/64"	⅜"	C.I.	6¼"
8	7.796"	1¼" "	14	4"	2¼"	⅜"	Steel	4"
9	28.738"	1" "	64	2½"	2½"	"	C.I.	3¾"
10	4.456"	1" "	14	2½"	2"	⅜"	Steel	2½"
11	24"	4" Diametral	96	3½"	2"	"	C.I.	3"
12	4"	4" "	16	3"	1 7/16"	⅜"	Steel	3"

FIG. 21.

spacing, so that the load on the bracket could not exceed the maximum wheel load of the crane, which was 15,000 lb. The crane was operated by two 5-h.p. air engines—one for the longitudinal and the other for the transverse movement. The speed was from 40 to 50 ft. per min., quite sufficient for the short distance covered. Each end of the [fol. 4301] crane had two swinging arms, to each of which was attached a cable hoist, operated by an air-driven ram, to lift the crane girders for the purpose of moving them ahead, section by section, as pipe-laying proceeded.

Although the laying of the mains in the tunnel was to be done by the tunnel construction organization, the jointing of the pipes, when and as laid, was to be done by the Street Department of Mains of the Company. At the same time, it devolved on the tunnel organization to subject all joints to test after they were caulked. The requirements were that each joint should be subjected to a test by air pressure at 20 lb. per sq. in., and that such test should be applied in each line of pipe as each ten pipe lengths were laid. It was obvious that this latter requirement would limit the progress of laying to the rapidity of caulking operations, and thus interfere seriously with procedure. Further, to consider plugging the end of the pipe main, and to have a portable end bulkhead to be erected and secured as each ten lengths were laid, would have involved great delay, as the caulking operations would have to be completed up to the last length laid before such testing could proceed. The writer, therefore, designed a novel machine (Fig. 22) for testing joints. This was a complete traveling outfit, consisting of a double bulkhead on a wheeled frame, which could be pushed by hand through the inside of the pipe mains and enclose any joint within an annular space. The two bulkheads consisted of pneumatic tires inflated to make a tight joint between the testing machine and the inside wall of the pipe. Two testing machines were assembled at the tunnel works, one being used for each line of pipe. The machine consisted of a cast-iron piston, 71½ in. in diameter, or ½ in. less than the internal diameter of the pipes. Previous to laying, a great number of pipes had been calibrated, and the internal diameter was found to range from a minimum of 71⅝ in. to a maximum of 72¼ in. This piston was 24 in. long, with exterior

flanges, giving an annular space between flanges of 12 in. The two flanges were designed of cove form, to give close support to a soft and elastic rubber tube, and the exterior rings, attached by bolts to the center casting, like a junk ring to a piston, enabled the rubber packing rings to be inserted and, when inflated, to give the necessary support. These flanged grooves were fitted with a solid continuous tire tube, made of the finest inner tube rubber, and fitted with a standard automobile tire valve, the tube being 2½ in. in external diameter with 3/8-in. rubber walls. These

(Here follows Fig. 22, marked side folio page 4302)

[fol. 4003] tubes were made up so that when deflated the exterior diameter was 71 in. The inflation forced the tire out against the wall of the pipe and filled the grooves of the piston, and, when deflated, the elasticity of the rubber entirely withdrew it from contact with the pipe walls while the machine was pushed backward or forward within the pipes.

As the pressure to which all joints were to be subjected was 20 lb. per sq. in., it was thought that the pressure to which the tubes would need to be inflated to make a tight joint might be as high as 80 lb., but, actually, though this pressure was used in the first instance, it was found that 50 lb. was ample to make an absolutely tight joint for testing purposes. In operating the machine, the annular space was moved to a position central over the joint. Air from the high-pressure tunnel line mains was supplied by a flexible hose and, through a reducing valve—to step down the constant pressure of 50 lb.—to the manifold pipes connecting both rubber tubes. These being inflated, the test pressure was then applied through another reducing valve, a pressure gauge being fixed to the annular space, under the observation of the operator, so that the pressure might not be materially exceeded, to obviate any possibility of blowing out a joint already caulked. Another operator, on the outside of the hubs, previous to the application of the test pressure, painted the leaded joints with soap solution and watched for leaks which would be indicated by the formation of bubbles. These machines were easily oper-

PORTABLE BULKHEAD
FOR TESTING JOINTS OF
72-INCH CAST-IRON PIPE

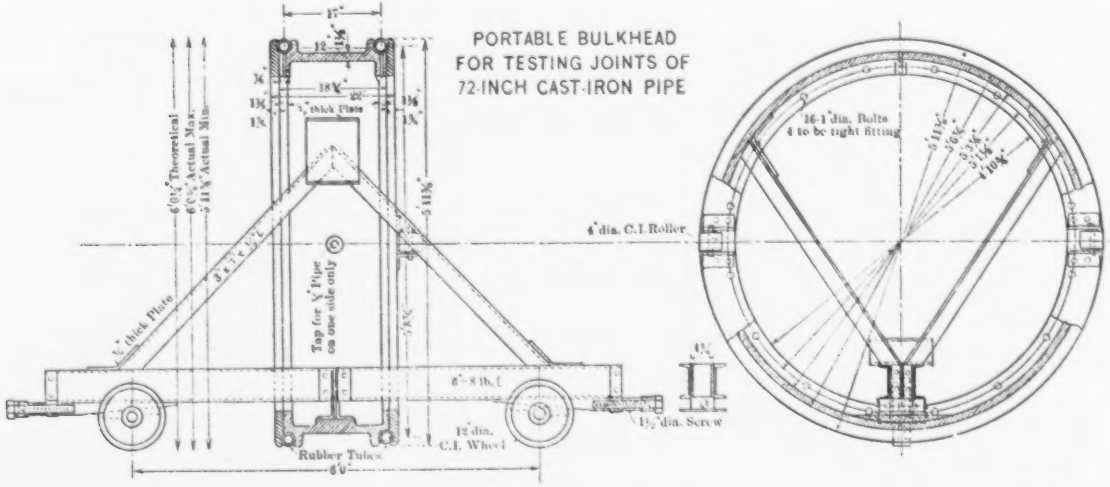


FIG. 22.

ated on their roller frames, joints caulked at any point could readily be tested, and, if re-caulked, could readily be re-tested. In addition to which, owing to the form of the machine, there was no appreciable end thrust to require other precautions than were given by the machine itself to balance that thrust.

The methods adopted in laying the 72-in. pipes in the tunnel consisted of lowering both pipe and saddles down the Astoria Shaft, hauling to the Bronx end, and advancing the work toward Astoria. This work was only carried on during an 8-hour day shift, as it was not desired to run any risk in handling this heavy material at night. The pipes were laid in pairs; that is, the operations consisted of the hauling and setting of two saddles, followed by the hauling and setting of two pipes; these, in turn, were followed by two more saddles, etc. By maintaining two saddles ahead of the pipe in place, this scheme permitted an overlapping of the various operations, such as [fol. 4304] placing and setting saddles, setting pipe, moving crane girders, removing hauling track, etc., thus reducing the loss of time to the minimum.

The pipes, which varied within 1½ in. of the correct length, were all numbered, and were selected from the storage rows as the work proceeded. Each pipe was transported to the shaft by rolling it on skids by a single cable engine with the cable looped around it. They were lowered singly down the shaft by the steel derrick, and with every other pipe two saddles were lowered. A tag line was attached from the pipe to a steel cable guide stretched from top to bottom of the shaft, to prevent the load from twisting.

The pipes and saddles were landed directly on specially designed flatcars, and haulage to and from the point of work was by the endless cable system on a single track. The pipe cars were run at a speed of 6 miles per hour and the other loads at 10 miles per hour. These speeds were greater than those usually adopted for an endless cable system in tunnel work, but in this case the system was designed with the minimum number of sheaves and turns possible, so that these speeds were readily maintained and without accident.

On the arrival of the saddles at the point of work they were transferred from the flatcars to the tunnel invert by the crane and accurately set to alignment, grade being maintained by steel wedging beneath them. The pipes were taken directly from the flatcars to position by the crane, two 1-in. wire cable slings, each attached to a 10-ton chain block, being used for raising the loads.

The setting of the pipes was followed, some 200 ft. back, by the caulking, and this at a like distance was followed by the testing machines; so that there was no confusion between the various gangs engaged.

The joints were hand-caulked with small air-driven caulking hammers, hemp yarn and lead wool being well driven to a depth of 5½ in. into the caulking space, which was ⅝ in. wide. This required 4 lb. of soaped yarn, 10 lb. of dry yarn, and 225 lb. of lead, per joint, the latter including 2% waste. The average progress was sixteen joints caulked each day with sixteen hammers. Each pipe line was provided with a portable bulkhead for testing, as previously described. After this testing, the joints were thickly coated with red lead.

Excellent progress was attained in laying the tunnel pipe, especially considering the fact that the entire tunnel trans- [fol. 4305] portation in both directions was over a single track. An average daily progress of twelve pipe lengths was attained for the whole work, and in the half tunnel length last executed the average progress was as great as sixteen lengths per day.

The erection of the structural steel runway proceeded from the Bronx end toward the Astoria Shaft, the material being lowered down the Bronx Shaft. No difficulty was found in doing this work at the same rate as pipe-laying, and it was not featured by any incident of unusual interest.

Personnel.—The undertaking herein described was carried out for the Astoria Light, Heat and Power Company (an organization closely affiliated with the Consolidated Gas Company of New York), and was under the general supervision and direction of Mr. William H. Bradley, Chief Engineer, and William Cullen Morris, M. Am. Soc. C. E., Engineer of Construction. Mr. Colin C. Simpson, Superintendent of Mains, had direct charge of jointing the pipes

inside the tunnel and of laying the street mains connecting therewith.

The development of the plan for the project of building the Astoria Gas Plant and the Astoria Tunnel herein described, must be attributed directly to Mr. Bradley.

The design, engineering, and construction of this entire work were executed by Jacobs and Davies, Incorporated, as Tunnel Engineers, for whom the writer acted as Engineer-in-Charge. The field engineering, including surveying, alignment, and detailed field work in connection with construction, was first in charge of Mr. G. F. Weismann, and during the later period was in charge of Mr. J. Chadwick Scott, who had previously acted as Assistant Field Engineer. The construction of the work, throughout, was in charge of Mr. Vivian Messiter as Engineers' Agent, assisted by Mr. Alexander W. Hodgson as Mechanical Engineer.

[fol. 4305a] John Vipond Davies,* M. Am. Soc. C. E. (by letter).—The very interesting contributions by Messrs. Freeman, Wiggin, and Wegmann, as to the experience in the Catskill Aqueduct, illustrate the principal points of difference between that undertaking and the Astoria Tunnel. In the latter the primary feature was the consolidation of the soft and partly decomposed rock in order to permit of the construction of the tunnel, and, secondarily, the filling of the fissures, for the purpose of stopping leaks. The primary feature in the case of the Catskill Aqueduct was the absolute filling of all voids and the stoppage of leaks, and, secondarily, the consolidation of the rock.

For the stoppage of leaks and the consolidation of the rock, considerable grouting had been done in 1892 and 1893 in the construction of the East River Gas Company's tunnel at 70th Street, Manhattan, referred to in the paper. At that time the writer ordered cement, specially burned, with the elimination of any plaster admixture, so as to obtain the most rapid setting material. That tunnel was constructed at a comparatively shallow depth, and there was so little cover between it and the bed of the river that high pressure could not be used. The same condition occurred in the construction of the Hudson and Manhattan

*New York City.

Tunnels, where large quantities of cement grout were also [fol. 4306] used for the purposes just referred to, and, in that case, also, the comparatively shallow depth of these tunnels precluded any high-pressure grouting. In this latter case it was found that grout would follow the line of least resistance and pass out with little interruption into sewers, drains, or watercourses, without generally spreading into the soil, to give the results which were attained with the high pressures and greater resistances encountered in the Catskill Aqueduct and the Astoria Tunnel.

Mr. Sanborn inquires as to the erection of the vertical risers. These pipes were of cast iron, 2¾ in. thick, with hub and spigot joints. It was specified that they were to be machine-faced on the bearing surfaces in hubs and ends of spigots, so that there should be a true fit at every joint. Unfortunately, the facing of the two ends was not executed from common centers, the result being that these pipes—which as designed should have given perfect vertical alignment—were, when erected, found to be in error, with a regular creep from the vertical, due to imperfections in foundry work, and this necessitated the use of wrought-iron shims to bring them into correct vertical alignment.

Mr. Lavis refers to the relations of mining engineers to the various tunnel operations now being carried on in New York City. It occurs to the writer that there is a general misunderstanding as to the use of the term "mining engineer" in this respect. In common with other engineers engaged on subway construction in New York City, the writer has been, to a considerable extent, brought up with coal mining and other underground operations. The timbering and methods of construction used by coal and metalliferous miners are as far removed from the methods of the engineer engaged in subway work as it is possible to conceive. The class of mining involved in subway and tunnel construction is distinctly a development of business, entirely apart from the ordinary practice of those engineers engaged in such purely mining operations. The men employed in England are known as "miners," but this class consists of those essentially engaged on engineering work in heavy soft ground tunneling, not in mining operations. A large majority of those engaged in this business

in New York have learned their trade in Europe, or from those who have brought the art from Europe, and there should be no conflict in the distinction between so-called mining engineering and engineering connected with tunnel work. The so-called mining engineer knows little of the type of timbering used in these tunnels.

Mr. Morris calls attention to the provisions for attending to accidents and casualties. The writer desires to state that in the treatment of employees injured or incapacitated on this work, the Astoria Light, Heat and Power Company [fol. 4307] provided more liberally than any employer with whom he has had any previous experience. As there were no hospitals in the vicinity of the shafts, the officers of this company decided to build them especially for this work; they equipped them completely, not only for rendering first aid, but also for the actual treatment of cases under competent medical supervision. The adjustments with employees were most liberal, and it is of interest to note that, notwithstanding this great care and the liberality in all cases, the entire cost of the accident amounted to only 5.36% of the pay-rolls.

[fol. 4308] DEFENDANTS' EXHIBIT No. 39

John J. Boylan, Appraiser, Tax Specialist, 277 Broadway
Tel. 1823 Worth

Consolidated Gas Rate Case

Summary of John J. Boylan's Appraisal

239	1-5	$160,135 00
368	1	451,269 28
369	1, 10, 11, 12, 13, 15	411,108 46
382	22	314,382 00
870	47-60	447,700 00
951	35	53,433 60
952	7 etc. 29, 30, 35	348,317 84
953	1	480,832 70
978	5-6	420,637 68
979	1-27	523,543 32

983	13	333,818 32
985	7 etc. 19, 20	197,340 00
987	37	130,879 94
988	1	485,350 38
989	16	150,819 90
989	1	192,183 20
991	1	274,169 72
991	47	45,220 00
1028	38	531,520 00

[fol. 4309]

1089	1	$1,276,456 36
1090	23	119,298 96
1092	16	290,114 88
1093	9	346,362 72
1157	1	878,658 00
1177	21	345,292 20
1456	17	173,937 06
1457	6	170,746 40
1457	17	180,852 32
1482	27	51,901 70
1475	1	47,080 00
1632	33	48,400 00
1670	1	396,100 00
1682	8-11	330,000 00
1683	18	77,981 40
1692	1	216,424 56
1704	5	332,571 36
1712	2	73,560 00
1978	37	123,200 00
1998	50, 53, 54, 55, 56	60,703 60
1999	1	197,815 20
2108	23	19,800 00
2497	132	200,640 00
2583	450	4,815 00
3236	1	199,500 00

[fol. 4310]

Hunts Point, 2770, 2775, E. F. G. H. 2777 J. 2781, 2776, 2778, 2780	$2,160,000 00
Astoria, Blocks 849.1, 850.1, 859.1, 860.1, 870.1, 871.1, 881.1, 882.1, 893.1, 894.1, 895.1	4,173,320 00

357 1 (Part of)	2,000 00
850 2	837 10
Land	$18,439,000 36
Buildings	4,098,549 00
	$22,537,549 36
Building Inv. Pl. Annex	45,552 00
	$22,583,101 36

[fol. 4311] Buildings:

Hester Street	$100,000 00
Irving Place	3,575,529 00
West 57th Street	340,800 00
114th Street	82,220 00
	$4,098,549 00
Inv. Pl. Annex Bldg.	45,552 00
	4,144,101 00

[fol. 4312] DEFENDANTS' EXHIBIT No. 41

Consolidated Gas Company of New York

8555

Table of Parallel Gas Mains in District Approximately One Mile Square, Between 14th and 34th Streets and Fifth and Tenth Avenues

	Item	Extent of parallels	Length of all mains in parallels	Excess of length of mains over length of parallels
Group I:				
2 Mains, 3″ to 16″ in diameter	A	42,287 ft.	84,574 ft.	42,287 ft.
3 Mains, 3″ to 16″ in diameter	B	43,254 "	129,762 "	86,508 "
4 Mains, 3″ to 16″ in diameter	C	34,397 "	137,588 "	103,191 "
5 Mains, 3″ to 16″ in diameter	D	17,354 "	86,770 "	69,416 "
6 Mains, 3″ to 16″ in diameter	E	50 "	300 "	250 "
Total Feet		137,342	436,994	301,652
Total Miles		26 01	83 14	57 13
Group II:				
1 Main, 3″ to 16″ with 1 main 18″ to 48″	A	1,316 ft.	2,632 ft.	1,316 ft.
1 Main, 3″ to 16″ with 3 mains 18″ to 48″	B	57 "	228 "	171 "
1 Main, 3″ to 16″ with 4 mains 18″ to 48″	C	9 "	45 "	36 "
Total Feet		1,382	2,905	1,523
Total Miles		26	55	29

Group III:				
2 Mains 3″ to 16″ with 1, 18″ to 48″	A	*10,530 ft.	10,530 ft.	10,530 ft.
2 Mains 3″ to 16″ with 2, 18″ to 48″	B	*491 "	982 "	982 "
3 Mains 3″ to 16″ with 1, 18″ to 48″	C	*7,253 "	7,253 "	7,253 "
4 Mains 3″ to 16″ with 1, 18″ to 48″	D	*1,307 "	1,307 "	1,307 "
5 Mains 3″ to 16″ with 1, 18″ to 48″	E	*285 "	285 "	285 "
Total Feet		*19,866	20,357	20,357
Total Miles		3 76	3 86	3 86
Group IV:				
2 Mains, 18″ to 48″	A	20 ft.	40 ft.	20 ft.
3 Mains, 18″ to 48″	B	32 "	96 "	64 "
Total Feet		52	136	84
Total Miles		.01	.02	.01
Total Feet All Groups		138,776	462,392	323,616
Total Mines All Groups		26 28	87 57	61 29

*Not included in total, as are shown in Group I.

DEFENDANTS' EXHIBIT 41-A

[fol. 4313] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallels of Two Mains 3" to 16" in Diameter in District between 14th and 34th Streets and Fifth and Tenth Avenues

Group I—Item "A":	Extent of parallels, feet	Length of all mains in parallels, feet
1-4", 1-10"	35	70
1-4", 1-12"	1,854	3,708
2-4	1,453	2,906
1-6", 1-4"	8,764	17,528
1-6", 1-8"	9,086	18,172
1-6", 1-10"	1,366	2,732
1-6", 1-12"	1,925	3,850
1-6", 1-16"	273	546
2-6"	16,285	32,570
1-8", 1-10"	854	1,708
1-8", 1-12"	36	72
1-8", 1-16"	34	68
2-8"	122	244
1-10", 1-12"	35	176
1-10", 1-16"	88	70
2-10"	24	48
2-12"	53	106
Total—2 Mains, 3" to 16" in Diameter	42,287	84,574

DEFENDANTS' EXHIBIT 41-B

[fol.4314] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallels of Three Mains, 3" to 16" in Diameter in District Between 14th and 34th Streets and Fifth and Tenth Aves

Group I—Item "B":	Extent of parallels, feet	Length of all mains in parallels, feet
1-4", 1-8", 1-16"	9	27
1-4", 2-8"	19	57
1-4", 1-10", 1-12"	10	30
1-4", 1-10", 1-16"	50	150
1-4", 1-12", 1-16"	44	132
1-6", 1-4", 1-8"	2,452	7,356
1-6", 1-4" 1-10"	1,816	5,448
1-6", 1-4", 1-12"	1,098	3,294
1-6", 1-4", 1-16"	36	108
1-6", 2-4"	2,098	6,294
1-6", 1-8", 1-10"	1,064	3,192
1-6", 1-8", 1-12"	857	2,571
1-6", 1-8", 1-16"	2	6
1-6", 2-8",	2,239	6,717
1-6", 1-10", 1-12"	837	2,511
1-6", 1-10", 1-16"	41	123
1-6", 2-10"	7	21
2-6", 1-4"	6,685	20,055
2-6", 1-8"	11,814	35,442
2-6", 1-10"	270	810
2-6", 1-12"	259	777
2-6", 1-16"	1,004	3,012
3-6"	7,725	23,175
1-8", 1-10", 1-12"	12	36
1-8", 2-10"	154	462
3-8"	69	207
1-10", 1-12", 1-16"	18	54
1-10", 2-12"	2,558	7,674
2-10", 1-12"	7	21
Total—3 Mains, 3 to 16" in Diameter	43,254	129,762

Defendants' Exhibit 41-C

[fol. 4315] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallels of Four Mains, 3" to 16" in Diameter in District Between 14th and 34th Streets and Fifth and Tenth Avenues

Group I—Item "C":	Extent of parallels, feet	Length of all mains in parallels, feet
1-4", 1-8", 1-10", 1-12"	17	68
1-4", 1-8", 1-12", 1-16"	2,258	9,032
1-4", 3-8"	6	24
1-4", 1-10", 1-12", 1-16"	2,604	10,416
1-6", 1-4", 1-8", 1-10"	22	88
1-6", 1-4", 1-8", 1-16"	26	104
1-6", 1-4", 2-8"	93	372
1-6", 1-4", 1-12", 1-16"	558	2,232
1-6", 2-4", 1-8"	105	420
1-6", 2-4", 1-10"	35	140
1-6", 2-4", 1-12"	778	3,112
1-6", 1-8", 1-10", 1-12"	30	120
1-6", 1-8", 2-10"	128	512
1-6", 1-8", 1-12", 1-16"	59	236
1-6", 2-8", 1-16"	1,282	5,128
1-6", 3-8"	3,576	14,304
1-6", 1-10", 2-12"	38	152
1-6", 2-10", 1-12"	174	696
2-6", 1-4", 1-8"	480	1,920
2-6", 1-4", 1-10"	9	36
2-6" 1-4", 1-12"	871	3,484
2-6", 1-4", 1-16"	729	2,916
2-6", 2-4"	3,158	12,632
2-6", 1-8", 1-10"	3,517	14,068
2-6", 2-8"	3,715	14,860
2-6", 1-10", 1-12"	1,783	7,132
2-6", 2-10"	3	12
3-6", 1-4"	3,530	14,120
3-6", 1-8"	2,101	8,404
3-6", 1-10"	251	1,004
3-6", 1-12"	888	3,552
3-6", 1-16"	122	488
4-6"	1,175	4,700
2-8", 2-10"	276	1,104
Total—4 Mains, 3" to 16" in Diameter	34,397	137,588

DEFENDANTS' EXHIBIT 41-D

[fol. 4316] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallels of Five Mains, 3" to 16" in Diameter in District Between 14th and 34th Streets and Fifth and Tenth Avenues

Group I—Item "D":	Extent of parallels, feet	Length of all mains in parallels, feet
1-6", 1-4", 1-8", 1-12", 1-16"	4,549	22,745
1-6", 1-4", 3-8"	9	45
1-6", 2-8", 2-10"	1,903	9,515
1-6", 3-8", 1-10"	37	185
1-6", 4-8"	694	3,470
2-6", 1-4", 2-8"	283	1,415
2-6", 2-4", 1-10"	757	3,785
2-6", 1-8" 1-10", 1-12"	48	240
2-6", 2-8", 1-16"	11	55
2-6", 3-8"	6	30
3-6", 1-4", 1-8"	832	4,160
3-6", 1-4", 1-10"	104	520
3-6", 2-4"	279	1,395
3-6", 1-8", 1-10"	1,257	6,285
3-6", 1-8", 1-16"	1	5
3-6", 2-8"	2,119	10,595
3-6", 2-10"	3	15
4-6", 1-4"	491	2,455
4-6", 1-8"	3,958	19,790
4-6", 1-10"	13	65
Total—5 Mains, 3" to 16" in Diameter	17,354	86,770

DEFENDANTS' EXHIBIT 41-E

[fol. 4317] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallels of Six Mains, 3" to 16" in Diameter in District Between 14th and 34th Street and Fifth and Tenth Avenues

Group I—Item "E":	Extent of parallels, feet	Length of all mains in parallels, feet
2-6", 2-8", 2-16"	26	156
3-6", 1-4", 2-10"	24	144
Total—6 Mains, 3" to 16" in Diameter	50	300

DEFENDANTS' EXHIBIT 41-F

[fol. 4318] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallel Mains, One, 3 to 16" in Diameter, with 1 or More Mains 18" to 48" in Diameter, in District Between 14th and 34th Streets and Fifth and Tenth Aves.

Group II—Item "A":	Extent of parallels, feet	Length of all mains in parallels, feet
1 4" and 1 20" Mains	71	142
1 4" and 1 24" Mains	12	24
1 6" and 1 20" Mains	175	350
1 6" and 1 24" Mains	224	448
1 6" and 1 30" Mains	280	560
1 8" and 1 20" Mains	26	52
1 8" and 1 24" Mains	34	68
1 12" and 1 18" Mains	26	52
1 12" and 1 24" Mains	432	864
1 16" and 1 20" Mains	36	72
Total—1 Main, 3" to 16" with 1 Main, 18" to 48"	1,316	2,632

Group II—Item "B":	Extent of parallels, feet	Length of all mains in parallels, feet
1 6" and 3 20" Mains	57	228
Total—1 Main, 3" to 16" with 3 Mains, 18" to 48"	57	228
Group II—Item "C":		
1 6" and 1 30", 3 20" Mains	9	45
Total—1 Main, 3" to 16" with 4 mains, 18" to 48"	9	45

DEFENDANTS' EXHIBIT 41-G

[fol. 4319] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallel Mains, Two or More, 3" to 16" in Diameter with 1 or more Mains 18" to 48" in Diameter in District Between 14th and 34th Streets and Fifth and Tenth Avenues

Group III—Item "A":	Extent of parallels, feet	Length of mains* 18" to 48" in parallels, feet
1 6", 1 4" and 1 20"	2,615	2,615
1 6", 1 4" and 1 24"	187	187
1 6", 1 4" and 1 30"	74	74
1 6", 1 8" and 1 20"	3,819	3,819
1 6", 1 8" and 1 24"	5	5
1 6", 1 12" and 1 24"	7	7
1 6", 1 16" and 1 20"	26	26
2 6" and 1 20"	1,038	1,038
2 6" and 1 24"	1,879	1,879
2 6" and 1 30"	827	827
2 12" and 1 24"	53	53
Total—2 Mains, 3" to 16" with 1, 18" to 48"	10,530	10,530

*Note: The Length of Mains, 3" to 16" are shown in Group I and are therefore not repeated here.

	Extent of parallels, feet	Length of mains* 18" to 48" in parallels, feet
Group III—Item "B":		
1 6", 1 8" and 2 20"	491	982
Total—2 Mains, 3" to 16" with 1, 18" to 48"	491	982
Group III—Item "C":		
1 6", 2 4" and 1 20"	11	11
1 6", 2 4" and 1 24"	767	767
1 6", 1 10", 1 12" and 1 24"	255	255
2 6", 1 4" and 1 20"	1,676	1,676
2 6", 1 8" and 1 20"	318	318
2 6", 1 12" and 1 20"	28	28
2 6", 1 16" and 1 20"	839	839
3 6", and 1 20"	985	985
3 6" and 1 24"	64	64
1 10", 2 12" and 1 24"	2,310	2,310
Total—3 Mains, 3" to 16" with 1, 18" to 48"	7,253	7,253

*Note: The Length of Mains, 3" to 16" are shown in Group I and are therefore not repeated here.

DEFENDANTS' EXHIBIT 41-H

[fol. 4320] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallel Mains, two or more 3" to 16" in Diameter with 1 or more Mains 18" to 48" in Diameter in District Between 14th and 34th Streets and 5th and 10th Aves.

	Extent of parallels, feet	Length of mains* 18" to 48" in parallels, feet
Group III—Item "D":		
1 6", 1 10", 2 12" and 1 24"	28	28
2 6", 2 4" and 1 20"	86	86
2 6", 2 8" and 1 20"	2	2
3 6", 1 4" and 1 20"	576	576
3 6", 1 8" and 1 20"	417	417
4 6", and 1 20"	183	183
Total—4 Mains, 3" to 16" with 1, 18" to 48"	1,207	1,207
Group III—Item "E":		
3 6", 2 8" and 1 20"	38	38
4 6", 1 8" and 1 20"	247	247
Total—5 Mains, 3" to 16" with 1, 18" to 48"	285	285

*Note: The length of Mains 3" to 16" are shown in Group I and are therefore not repeated here.

DEFENDANTS' EXHIBIT 41-I

[fol. 4321] Consolidated Gas Company of New York

Schedule of Mains Showing Details of Parallel Mains, 2 or 3, 18" to 48" in Diameter in District Between 14th and 34th Streets and Fifth and Tenth Avenues.

	Extent of parallels, feet	Length of mains* 18" to 48" in parallels, feet
Group IV—Item "A":		
2 20" Mains	20	40
Total—2 Mains, 18" to 48"	20	40
Group IV—Item "B":		
3 20" Mains	32	96
Total—3 Mains, 18" to 48"	32	96

*Note: The length of Mains 3" to 16" are shown in Group I and are therefore not repeated here.

[fol. 4322]

DEFENDANTS' EXHIBIT No. 42

Consolidated Gas Company of New York

Schedule of Gas Mains on Manhattan Island Where a Consolidated Gas Company Main is Paralleled on the Same Side of the Street by One or More Other Gas Mains (Consolidated or Other Company)

Group I—Smaller Mains Only:	Distance of parallels	Length of all mains in parallels	Excess of length of mains over length of parallels
2 Mains, 3" to 16" in Diameter	815,038	1,630,076	815,038
3 Mains, 3" to 16" in Diameter	377,972	1,133,916	755,944
4 Mains, 3" to 16" in Diameter	139,617	558,468	418,851
5 Mains, 3" to 16" in Diameter	40,874	204,370	163,496
6 Mains, 3" to 16" in Diameter	22,201	133,206	111,005
7 Mains, 3" to 16" in Diameter	4,206	29,442	25,236
Total feet	1,399,908	3,689,478	2,289,570
Total miles	265 13	698 77	433 64

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Schedule of Gas Mains—Continued

Group II—One smaller Main with one or more Larger Mains:	Extent of parallels	Length of all mains in parallels	Excess of length of mains over length of parallels
1 Main, 3″ to 16″ with 1, 18″ to 48″	192,559	385,118	192,559
1 Main, 3″ to 16″ with 2, 18″ to 48″	39,502	118,506	79,004
1 Main, 3″ to 16″ with 3, 18″ to 48″	13,834	55,336	41,502
1 Main, 3″ to 16″ with 4, 18″ to 48″	208	1,040	832
1 Main, 3″ to 16″ with 5, 18″ to 48″	38	228	190
Total feet	246,141	560,228	314,087
Total Miles	46 62	106 10	59 48
Group III—Two or More Smaller Mains with One or More Larger Mains:			
2 Mains, 3″ to 16″ with 1, 18″ to 48″	*106,438	106,438	106,438
2 Mains, 3″ to 16″ with 2, 18″ to 48″	13,957	27,914	27,914
2 Mains, 3″ to 16″ with 3, 18″ to 48″	1,085	3,255	3,255
3 Mains, 3″ to 16″ with 1, 18″ to 48″	54,794	54,794	54,794
3 Mains, 3″ to 16″ with 2, 18″ to 48″	6,174	12,348	12,348
4 Mains, 3″ to 16″ with 1, 18″ to 48″	7,963	7,963	7,963
4 Mains, 3″ to 16″ with 2, 18″ to 48″	1,383	2,766	2,766
4 Mains, 3″ to 16″ with 3, 18″ to 48″	1,807	5,421	5,421

4 Mains, 3″ to 16″ with 4, 18″ to 48″	241	964	964
5 Mains, 3″ to 16″ with 1, 18″ to 48″	6,744	6,744	6,744
Total Feet	*200,586	228,607	228,607
Total Miles	37.99	43.30	43.30
Group IV—Larger Mains Only:			
2 Mains, 18″ to 48″ in Diameter	21,655	43,310	21,655
3 Mains, 18″ to 48″ in Diameter	4,249	12,747	8,498
4 Mains, 18″ to 48″ in Diameter	762	3,048	2,286
5 Mains, 18″ to 48″ in Diameter	104	520	416
Total Feet	26,770	59,625	32,855
Total miles	5.07	11.29	6.22
Grand Total—Feet	1,672,819	4,537,938	2,865,119
Grand Total—Miles	316.82	859.36	524.64

*3″ to 16″ Mains are shown in Group I. Excess is length of large mains. Not included in "Extent of Parallels" total.

[fol. 4323] DEFENDANT'S EXHIBIT No. 43

Consolidated Gas Company of New York

Schedule of Gas Mains of Other Than Consolidated Gas Company on Manhattan Island, Where Two or More Mains are Parallel on Same Side of Street

Consolidated Gas Company of New York

Group I—Smaller Mains Only:	Extent of parallels	Length of all mains in parallels	Excess of length of mains over length of parallels
2 Mains 3″ to 16″ in Diameter	123,814	147,628	123,814
3 Mains 3″ to 16″ in Diameter	7,679	23,037	15,358
4 Mains 3″ to 16″ in Diameter	206	824	618
Total Feet	131,699	271,489	139,790
Total Miles	24 94	51 42	26 48
Group II—One Smaller Main with One or More Larger Main:			
1 Main 3″ to 16″ and 1 Main 18″ to 48″	29,772	59,544	29,772
Total Feet	29,772	59,544	29,772
Total Miles	5 64	11 28	5 64

Group IV—Larger Mains Only:			
2 Mains 18″ to 48″ in Diameter	925	1,850	925
Total Feet	925	1,850	925
Total Miles	18	35	17
Grand Total—Feet	162,396	332,883	170,487
Grand Total—Miles	30 76	63 05	32 29

[fol. 4324] DEFENDANTS' EXHIBIT No. 44

Consolidated Gas Company of New York

Small-sized Mains on Manhattan Island Shown on the Main Maps of the Consolidated Gas System

Size of mains	Number of feet
1½ inch	22
2 inch	719
3 inch	26,356
5 inch	2,503
Total small-sized mains	29,600

[fol. 4325] DEFENDANTS' EXHIBIT No. 45

Consolidated Gas Company of New York

Study of Parallel Mains on Manhattan Island

From the Consolidated Gas Company's maps of gas mains on Manhattan Island, the distances where there were two or more mains on the same side of a street were measured and tabulated, together with the data as to size of mains, ownership, and use, where given. The results have been summarized on the accompanying tables, one for the instances where at least one of the parallel mains was Consolidated Gas Company and another for the comparatively few instances where there was no Consolidated Gas Company main, the parallel mains being entirely of other companies, such as the New Amsterdam and the Standard.

The total distance where paralleling exists on Manhattan Island is 316.82 miles where any Consolidated Gas Company mains are involved, and 30.76 miles where only other companies are involved, making a total of 347.58 miles for all mains of all companies. The total length of mains included in these parallels is 859.46 miles where any Consolidated Gas Company mains are involved and 63.05 miles for other cases, making a total of 922.51 miles altogether. The length of mains exceeds the length of the parallels by 542.64 miles where any Consolidated Gas Company mains are involved, by 32.29 miles in other cases, or a total of

574.93 miles. The ratio of the length of mains to the length of parallels is 2.71, where any Consolidated Gas Company mains are involved, 2.05 for the other cases, and an average of 2.65 for all cases.

The above figures are for mains irrespective of size and use, thus including transfer mains. The situation for the smaller mains only (16-inch or less) is as follows: 265.13 miles of parallels where any Consolidated Gas Company [fol. 4326] mains are involved, 24.94 miles for other cases, a total of 290.07. The length of mains in the parallels is 698.77 where any Consolidated Gas Company mains are involved, 51.42 miles in other cases, a total of 750.19. The excess of length of mains over length of parallels is 433.64 miles where any Consolidated Gas Company mains are involved, 26.48 miles in other cases, a total of 460.12 miles. The ratio of length of mains to length of parallels is 2.64 where any Consolidated Gas Company mains are involved, 2.06 in other cases, and an average of 2.59 for all cases. In other words, for the 290.07 miles in Manhattan Island where there is paralleling of mains 16 inches or less in diameter (which eliminates transfer mains—and some distribution mains as well) there is an average of 2.59 miles of main for each mile along the side of the street where paralleling exists.

The mains in parallels that were indicated on the maps as transfer mains totaled 36.44 miles; and of the total distance where paralleling exists, 12.65 miles are in cases where there is not more than one main other than transfer mains, and hence no paralleling except by transfer mains. Of the 12.65 miles, 1.34 miles are where there is no Consolidated Gas Co. main involved, leaving 11.31 miles where a Consolidated Gas Co. main is present. In the 1.34 miles of parallel where there is no Consolidated Gas Co. main, there are 1.39 miles of transfer main, eliminating which from the 36.44 miles leaves 35.05 miles of transfer mains in parallels where there is a Consolidated Gas Co. main present.

Deducting the 11.31 miles of parallels from the total of 316.82 miles of parallels, including transfer mains, where a Consolidated Gas Co. main is involved, leaves 305.51 miles of parallels of other than transfer mains, where a

Consolidated Gas Co. main is involved. Deducting the [fol. 4327] 35.05 miles of transfer mains from the 859.46 miles of all mains in parallels, where a Consolidated Gas Company main is involved, leaves 824.41 miles other than transfer mains. The ratio of 824.41 miles to the corresponding 305.51 miles of parallels is 2.70.

Taking the 347.58 miles of parallels for all mains of all companies, and deducting the 12.65 miles of parallels due to transfer mains irrespective of company, leaves 334.93 miles of parallels of other than transfer mains. Deducting from the 922.51 miles of all mains in all parallels, the 36.44 miles of transfer mains leaves 886.07 miles other than transfer mains. The ratio of this 886.07 miles to the 334.93 miles of parallels of other than transfer mains is 2.65.

[fol. 4328] DEFENDANT'S EXHIBIT No. 45A

Ratio of Length of Gas Mains in Parallel to Length of the Parallels, Manhattan Island

All mains in parallels where Consolidated Gas Co. main is present	316 82	859 46	2 71
All mains in parallels where no Consolidated Gas Co. main is present	30 76	63 05	2 05
All mains of all companies	347 58	922 51	2 65
Mains 16″ and smaller, in parallels where Consolidated Gas Co. main is present	265 13	698 77	2 64
Mains 16″ and smaller, in parallels where no Consolidated Gas Co. main is present	24 94	51 42	2 06
Mains 16″ and smaller, all companies	290 07	750 19	2 59
All mains other than transfer mains, in parallels where Consolidated Gas Co. main is present	305 51	824 41	2 70
All mains other than transfer mains, all companies	334 93	886 07	2 65

[fol. 4329] DEFENDANT'S EXHIBIT No. 45B

Consolidated Gas Company of New York

Study of Parallel Mains in District Bounded by Fourteenth Street, Fifth Avenue, Thirty-fourth Street, and Tenth Avenue

Tabulation of all parallel mains of the Consolidated Gas Company and subsidiary companies was made for the district from Fifth Avenue to Tenth Avenue and from Fourteenth Street to Thirty-fourth Street. The distance east and west, from the east line of Fifth Avenue to the east line of Tenth Avenue, is 0.875 mile, and the distance from Fourteenth Street to Thirty-fourth Street, including half the width of the blocks adjoining Fourteenth Street on the south and Thirty-fourth Street on the north, is 1.039 mile, making the area 0.909 square mile.

The length of streets for which the tabulation of parallel mains was made is as follows:

Fourteenth Street to Thirty-first Street, inclusive, together with Thirty-third Street and Thirty-fourth Street (Thirty-second Street being closed from Seventh Avenue to Tenth Avenue, by the Pennsylvania Terminal):		
Twenty streets, 0.875 mile each (Fifth Avenue to Tenth Avenue)	17 50	miles
Thirty-second Street (Fifth Avenue to Seventh Avenue)	.36	"
Fifth Avenue to Ninth Avenue, inclusive, five avenues, 0.981 mile each (Fourteenth Street to Thirty-fourth Street)	4 91	"
Broadway (Fifth Avenue to Thirty-fourth Street)	.55	"
Total miles of street	23 32	"
Multiply by two to obtain minimum number of miles of distribution mains to serve above district, one on each side of each street and avenue	46 64	miles

In this district there was found to be a distance of 26.28 miles where there — two or more mains paralleling one an- [fol. 4330] other. Deducting this from the 46.64 miles of minimum length of distribution mains leaves 20.36 miles where no paralleling exists, i. e., where there is no more than one main on each side of the street.

In the 26.28 miles where paralleling exists, there were found to be 87.57 miles of mains, of which 83.14 miles are 16-inch or smaller, and 4.43 miles 18-inch or larger. Adding to the 83.14 miles the 20.36 miles of single unparalleled mains, gives 103.50 miles as the total length of distribution mains in the district, exclusive of distribution mains in parallel that are 18-inch or larger. This total is 2.22 times the 46.64 miles of minimum length of distribution mains based on two per street.

The 87.57 miles of mains that are found in the 26.28 miles where paralleling exists, are equivalent to 3.33 times the latter figure. The 87.57 miles, however, includes transfer mains. Taking only the 83.14 miles of mains that are 16-inch or smaller, thus eliminating transfer mains (and some distribution mains as well) and also eliminating from the 26.28 miles where paralleling exists, the 0.27 mile where the paralleling is not between the smaller mains (3" to 16"), the ratio (83.14 to 26.01) becomes 3.20 times the minimum, i. e., 3.20 miles of main for each mile of street, taking one side only, or 6.40 miles of main for each mile of street, taking both sides.

The actual number of miles by which the length of the parallels, or in other words, of a single main covering the same distance as the parallels (26.28 miles), is exceeded by the total length of the mains in the parallels (87.57 miles) is 61.29 miles for the district, considering all mains. Considering only the mains that are 16-inch or smaller, the length of the parallels (26.01 miles) is exceeded by the total length of mains therein (83.14 miles) by 57.13 miles.

[fol. 4331] The mains that were indicated on the maps as transfer mains totaled 0.90 miles for the district, and of this distance there was 0.66 mile where there was only one main in parallel with the transfer main. Deducting 0.66 mile from the 26.28 miles of parallels leaves 25.62 miles of parallels, involving mains other than transfer mains.

Deducting 0.90 mile from the 87.57 miles of mains in all the parallels leaves 86.67 miles of mains in the parallels, other than transfer mains. This is 61.05 miles in excess of the 25.62 miles of parallels. The 61.05 miles also represents the excess over the 46.64 miles of main on the basis of one on each side of every street. Adding the 61.05 miles to the 46.64 miles, gives 107.69 miles total, the ratio of which to the 46.64 miles is 2.31, this representing the average number of miles of main in the district, other than transfer mains, for each mile along both sides of every street.

With respect to parallel mains that are 16-inch or smaller, there were found to be 102 different combinations of sizes and numbers—from two mains to as many as six paralleling one another. There are 12 combinations of a 16-inch or smaller main with one or more larger mains, and 30 combinations of two or more 16-inch or smaller mains with one or more larger. Of the 102, the total length for two of the combinations is paralleled also by larger mains, and thus duplicates two of the 30 combinations of small and large mains, leaving only 100 combinations where only the smaller mains are involved. There are two combinations of large mains only, making a grand total of 144 different combinations of mains, small and large.

[fol. 4332] DEFENDANTS' EXHIBIT No. 46

Consolidated Gas Company of New York

Schedule of Mains Showing Number, Size, Company Owning and Length of Mains in Sundry Instances of Paralleling Gas Mains on Manhattan Island

First Avenue—Between 19th St. St. 21st St. (Map 513).

On East Side of First Avenue for 486 feet:

1 20" Cons.*
1 18" "
1 16" "
(1 4" " So. End 219 feet only.
(1 8" " No. End 267 feet only.
1 30" " 241 feet only (No. End).
1 4" Mut.
1 6" N. A.
1 20" Stand.

On West Side of First Avenue, for 486 feet:

1 6" Cons.
1 6" Mut.
1 6" N. A.
1 24" Stand.

Second Avenue—Between 23rd Street and 32nd Street. (Map 523).

On East Side of Second Avenue, for 2,267 feet:

1 4" Mut.
1 12" N. A.
1 24" N. A.
1 8" Stand.

On West Side of Second Avenue for 2,267 feet:

1 18" Cons. Manh.
1 4" Mut.
1 6" N. A. 2,236 feet only.
1 8" Stand.

---

*See end of schedule for table of abbreviations.

Third Avenue—Between 32nd Street and 40th Street. (Maps 532-3).

On East Side of 3rd Avenue, for 2,101 feet:

1 8" Cons. Mun.
1 20" Cons. Manh. (To 34th St. only) 501 feet only.
1 6" Cons. Met. (34th to 40th St. only) 1,569 feet only.
1 12" Mut.
1 8" N. A.
1 8" N. A.
1 10" Stand.

On West Side of 3rd Avenue, for 2,102 feet:

1 6" Cons. Manh. (To 34th St. only) 529 feet only.
1 16" Cons. Mun. (34th to 40th St. only) 1,547 feet only.
1 12" Cons. Mun. (To 34th St. only) 555 feet only.
1 6" Cons. Met. (34th to 40th St. only) 1,547 feet only.

[fol. 4333]

1 16" Cons. Mun.*
1 6" Mut.
1 6" N. A.
1 8" N. A.
1 10" Stand. (2,090 feet only).

Fourth Avenue—Between 31st Street and 32nd Street. (Map 552).

On East Side of Fourth Avenue for 266 feet:

1 8" Con. Manh.
(1 8" Cons. Mun. No. End 238 feet only.
(1 6" Cons. Mun. So. End 28 feet only.
1 6" Mut. 251 feet only
1 8" Stand. 254 feet only

*See end of schedule for table of abbreviations.

On West Side of Fourth Avenue for 265 feet:

1 8" Con. Mun.
1 4" Con. Manh.
1 4" Mut. 251 feet only
1 6" N. A. 256 feet only
1 8" Stand 254 feet only

Broadway—Between 26th Street and 31st Street. (Map 647).

On East Side of Broadway, for 1,468 feet:

1 8" Cons.
1 6" Cons.
(1 4" Mut. So. End 118 feet
(1 6" Mut. No. End 1,350 feet
1 6" N. A.
1 8" Stand.

On West Side of Broadway, for 1,468 feet:

1 6" Cons.
1 8" Cons.
1 10" Mut.
1 8" N. A.
1 10" Stand.

[fol. 4334] Fifth Avenue—Between 21st Street and 22nd Street. (Map 570).

On East Side of Fifth Avenue, for 255 feet:

1 6" Cons. Manh.*
1 6" Cons. Mun.
1 4" Mut.
1 6" N. A.

On West Side of Fifth Avenue for 255 feet:

1 6" Cons. Manh.
1 6" Con. Mun.
1 10" Mut.
1 6" N. A. No. End. 249 feet only
1 4" N. A. So. End 6 feet only

*See end of schedule for table of abbreviations.

Sixth Avenue—Between 42nd Street and 47th Street. (Map 584).

On East Side of Sixth Avenue, for 1,514 feet:

(1 12" Con. Mun. So. End 216 feet only
(1 6" Con. Mun. No. End 1,298 feet only
1 6" Con. Met.
1 16" Mut.
1 16" N. A.
1 12" N. A.
1 8" Stand.

On West Side of Sixth Avenue, for 1,514 feet:

1 6" Con. Mun. So. End 211 feet only
1 12" Con. Mun. No. End 1,301 feet only
1 12" Con. Met.
1 6" Con. Pintsch. (Dead) 765 feet only
1 4" Mut.
1 8" N. A.
1 12" N. A.
1-8" Stand.

[fol. 4335] Seventh Avenue—Between 17th Street and 30th Street. (Maps 589-590).

On East Side of 7th Ave. for 3,322 feet:

1 6" Con.* (21st to 22nd St. 6 feet only
1 6" Con. (21st to 22nd St. 228 feet only
1 30" Con.
1 8" N. A. 3,236 feet only
(1 8" N. A. 3,236 feet only
(1 12" N. A. 86 feet only
1 8" Stand. 3,250 feet only

*See end of schedule for table of abbreviations.

2953

On West Side of 7th Ave. for 3,327 feet:

1 6″ Cons.
1 30″ Cons. 247 feet only
1 6″ Mut. 3,226 feet only
1 8″ N. A. 3,258 feet only
(1 6″ N. A. 3,258 feet only
(1 10″ N. A. 69 feet only
(1 8″ Stand. (17th-19th St.) 488 feet only
(1 6″ Stand. 2,839 feet only

Eighth Avenue—Between 14th St. and 19th St. (Map 597).

On East Side of Eighth Avenue for 1,260 feet:

1 12″ Cons. Mun.
1 6″ Cons. Manh.
1 4″ Mut.
1 8″ N. A.
1 16″ N. A.

On West Side of Eighth Avenue for 1,260 feet:

1 6″ Cons. Mun.
1 6″ Cons. Manh.
1 10″ Mut.
1 6″ N. A.
1 6″ N. A. (So. End) 3 feet only
1 8″ N. A. (1,257 feet only

[fol. 4336] Ninth Avenue—Between 15th St. and 16th St. (Map 607).

On East Side of Ninth Avenue for 285 feet:

1 20″ Cons. Manh.*
1 8″ Cons.
1 6″ Mut.
1 20″ N. A.

On West Side of Ninth Avenue for 285 feet:

1 8″ Cons. Manh.
1 6″ Mut.
1 8″ N. A.
1 6″ N. A.

*See end of schedule for table of abbreviations.

Fourteenth Street—Between Irving Place and Third Avenue. (Map 182).

On South Side of Fourteenth St. for 418 feet:

1 6″ Cons. Mun.
1 6″ Cons. Manh.
1 8″ Mut.
1 6″ N. A.

On North Side of Fourteenth St. for 418 feet:

1 6″ Cons. Manh.
1 10″ Cons. Mun.
1 6″ Mut.
1 6″ N. A.
1 10″ Stand.

[fol. 4337] Twenty-third Street—Between Lexington Ave. & Third Ave. (Map 203).

On South Side of 23rd Street for 419 feet:

(1 8″ Cons. Manh.* West End 409 feet only
(1 6″ Cons. Manh. East End 10 feet only
1 4″ Mut.
1 6″ N. A.
1 6″ Stand.

On North Side of 23rd Street for 419 feet:

1 6″ Cons. Manh.	404	feet only
(1 6″ Cons. Manh. Dead	12	" "
(1 8″ Cons. Mun.	407	" "
1 6″ Mut.	407	" "
1 6″ N. A.	411	" "
1 6″ Stand.		

Forty-second—Between Lexington Ave. & Third Ave. (Map 243).

On South Side of Forty-second Street for 419 feet:

1 8″ Cons. Mun.
1 4″ Cons. Mun. (Disused)
1 4″ Mut.
1 12″ N. A.
1 8″ Stand.

On North Side of Forty-second Street for 419 feet:

1 20″ Cons.
1 8″ Mut.
1 12″ N. A.
1 8″ Stand.

[fol. 4338] *Table of Abbreviations

Cons.—Consolidated Gas Company
Cons. Manh.—Consolidated Manhattan.
Cons. Met.—Consolidated Metropolitan
Const. Mun.—Consolidated Municipal
Mut.—Mutual
N. A.—New Amsterdam
Stand—Standard

(Here follows Defendants' Exhibit No. 47, marked side folio pages 4339, 4340, 4341, and 4342)

[fol. 4343] DEFENDANT'S EXHIBIT 48

At a regular meeting of the Board of Directors of The Northern Bank of New York, held at No. 215 West 125th Street, New York, the 29th day of April, 1910, the following was unanimously adopted:

Whereas, Mr. Martin McHale, associated himself with this Bank as a Director and Vice-President during the month of January, 1908, and whereas, since that time, he has rendered to this Bank invaluable services which have greatly aided in establishing the institution firmly in the trust of the community, and whereas Mr. McHale is now called to a larger field of service in association with the Banking Department of the State of New York, which necessitates his severing his official connection with this institution as Vice-President thereof, and whereas, the said resignation of Mr. McHale as such Vice-President has been accepted by this Board with great regret, now therefore,

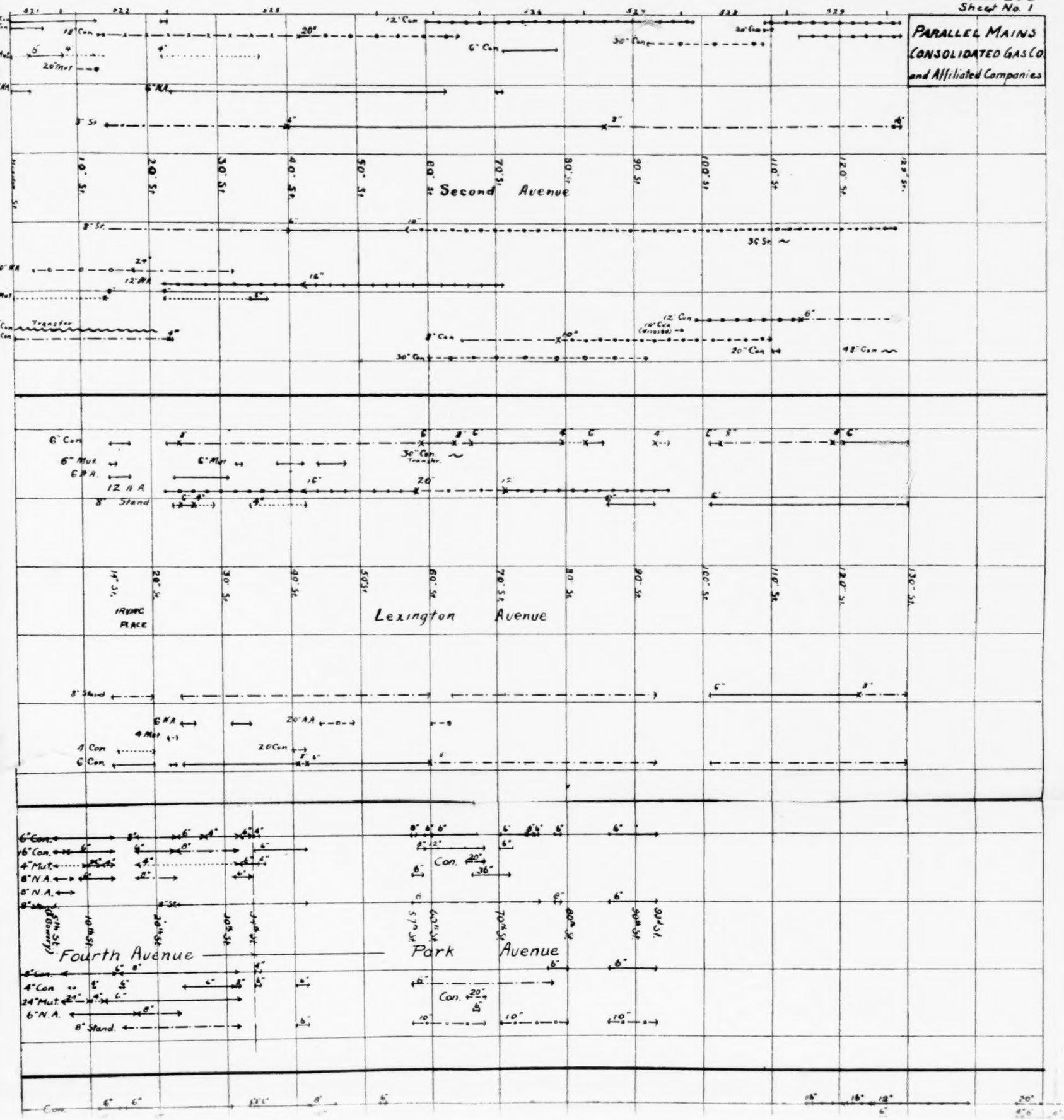
Resolved, that this Board in accepting such resignation [fol. 4344] express its appreciation of the fidelity and de-

*See end of schedule for table of abbreviations.

DEFENDANT'S EXHIBIT NO. 47

Table 252
Sheet No. 1

PARALLEL MAINS
CONSOLIDATED GAS CO.
and Affiliated Companies



DEFENDANT'S EXHIBIT NO. 47

Table 252
Sheet No. 1

PARALLEL MAINS
CONSOLIDATED GAS CO
and Affiliated Companies

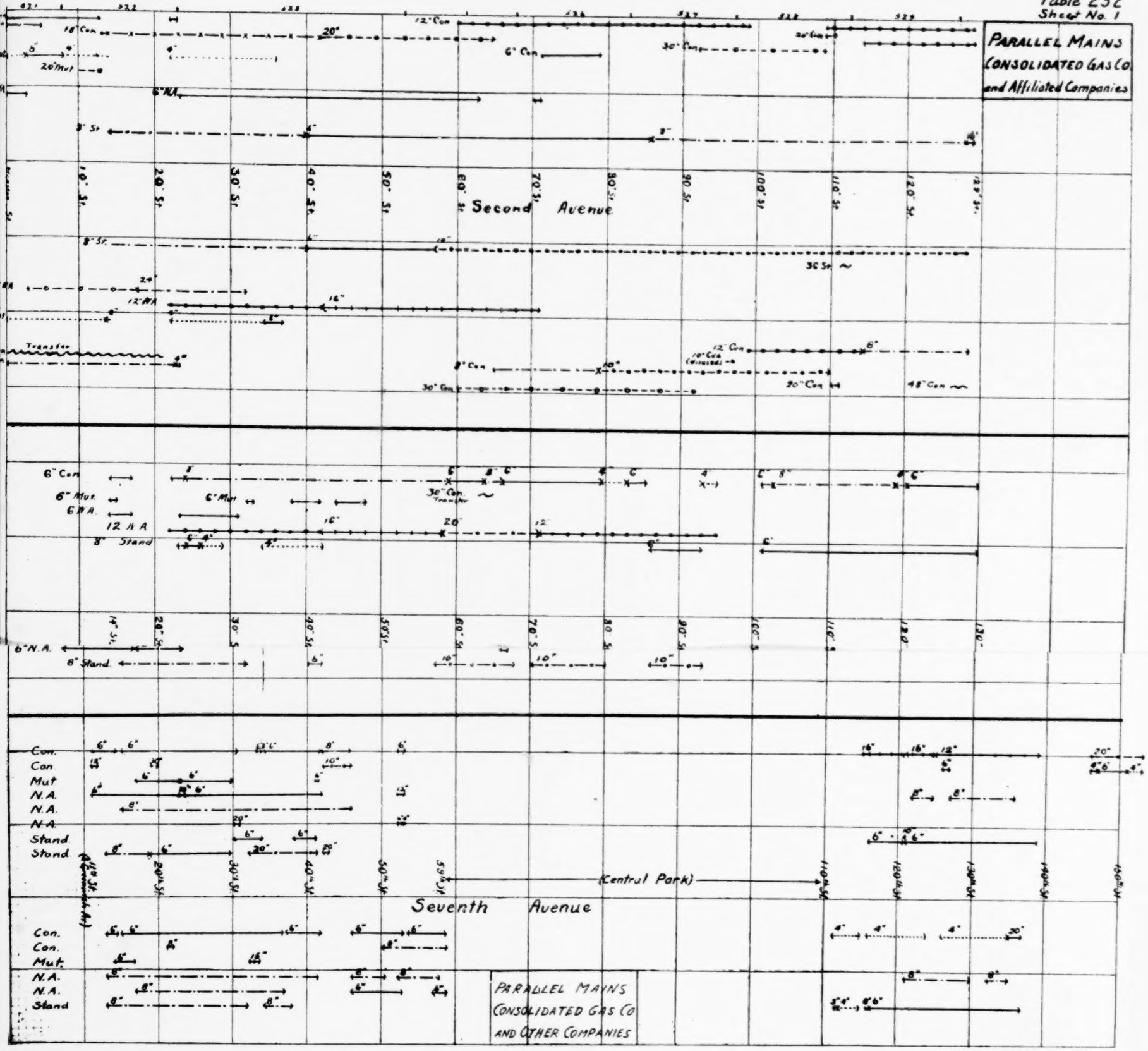
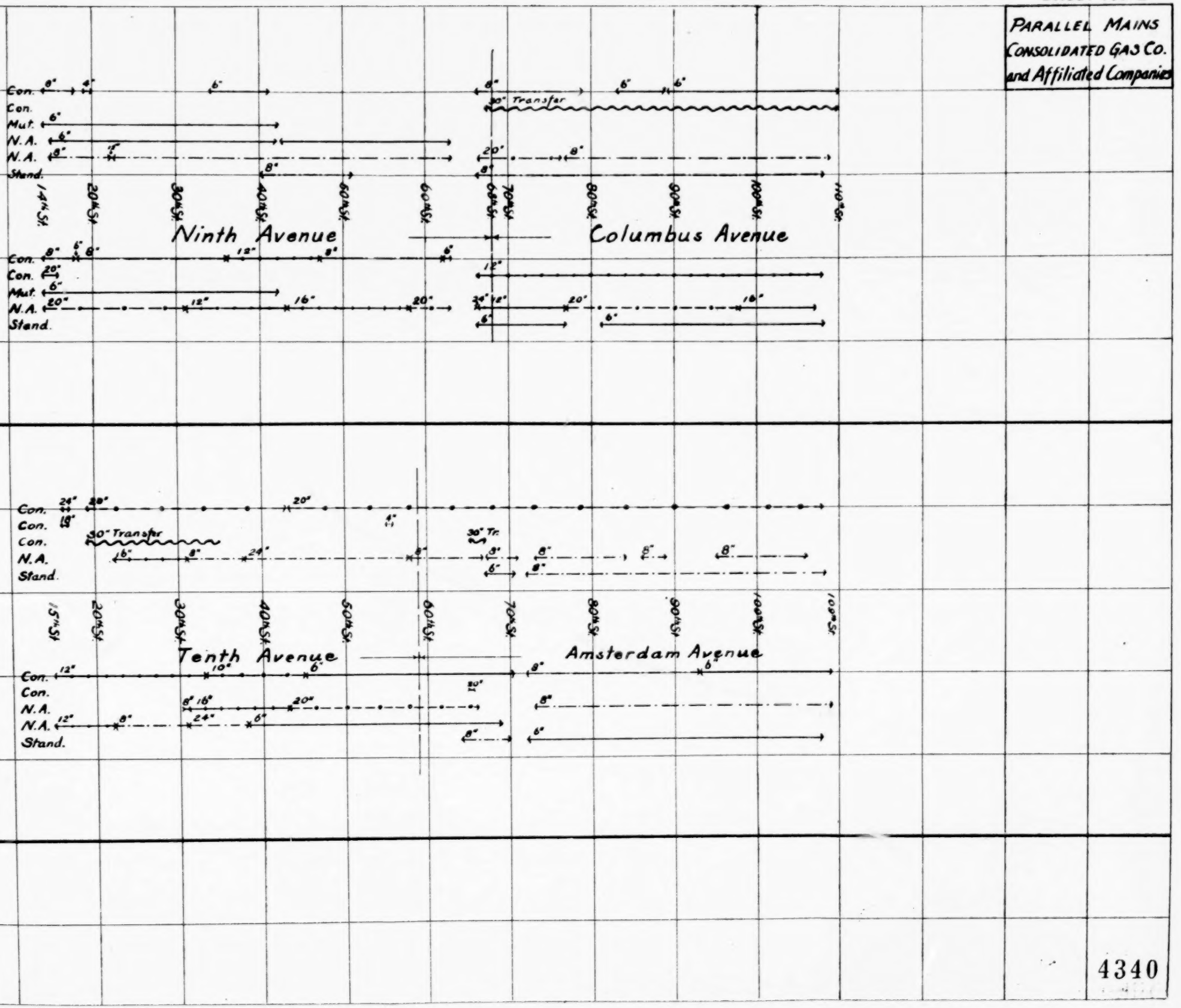


Table 252
Sheet No. 2

PARALLEL MAINS
CONSOLIDATED GAS CO.
and Affiliated Companies



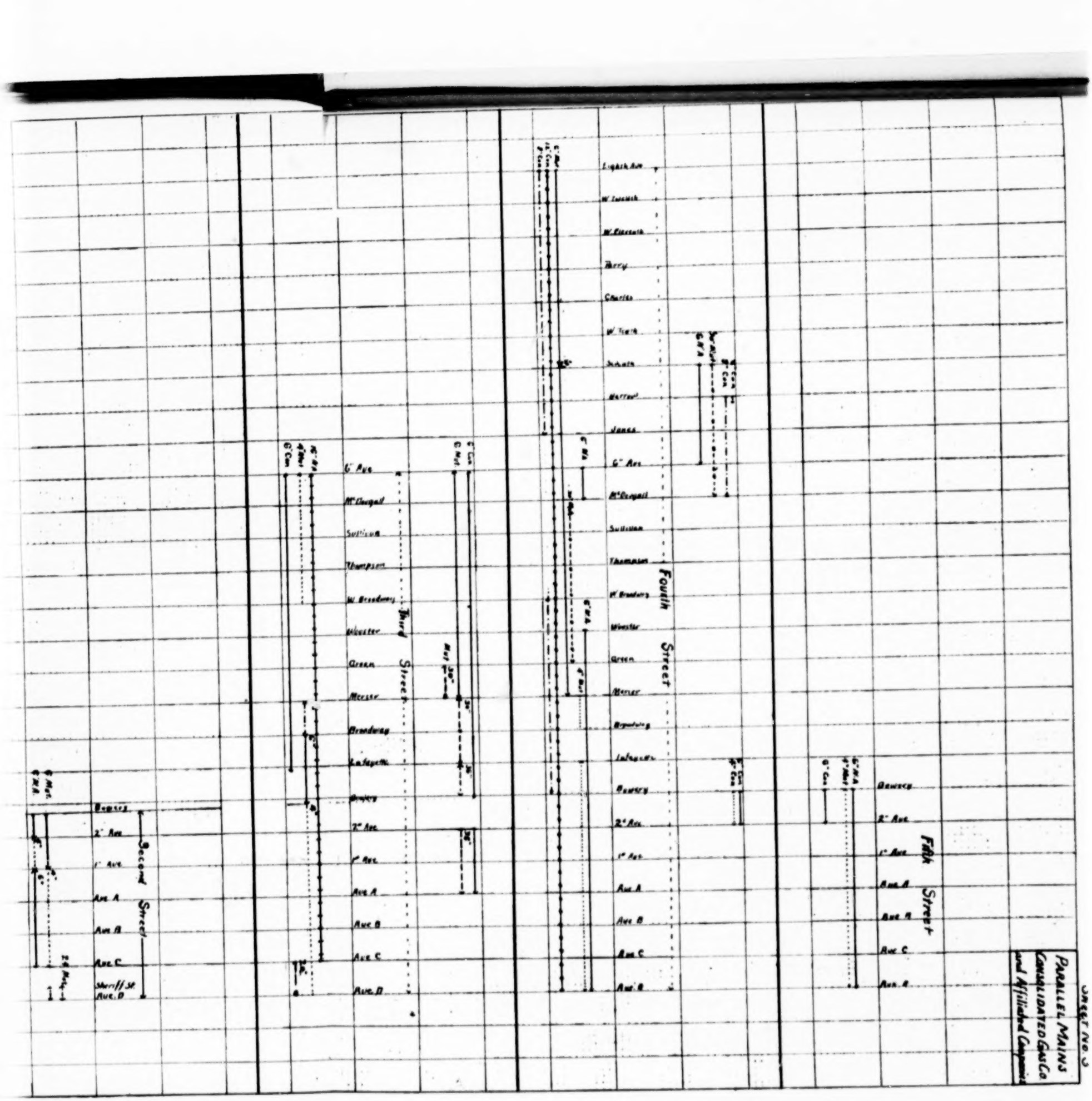

PARALLEL MAINS
Consolidated Gas Co
and Affiliated Companies
Sheet No. 3
Fourth Street
Fifth Street
Third Street
Second Street
Eighth Ave
W. Fourth
W. Eleventh
Perry
Charles
W. Tenth
Jackson
Warren
Jones
6" Ave
McDougall
Sullivan
Thompson
W. Broadway
Wooster
Green
Mercer
Broadway
Lafayette
Bowery
2nd Ave
1st Ave
Ave A
Ave B
Ave C
Ave D
Sheriff St
6" Cas
8" Cas
12" Cas
4" Cas
6" Mains
8" Mains
12" Mains
30" Mains
36" Mains
24" Mains
4" Mains
6" W.A.
8" W.A.
4" W.A.

Table 252
Sheet No. 3

PARALLEL MAINS
CONSOLIDATED GAS CO
and Affiliated Companies

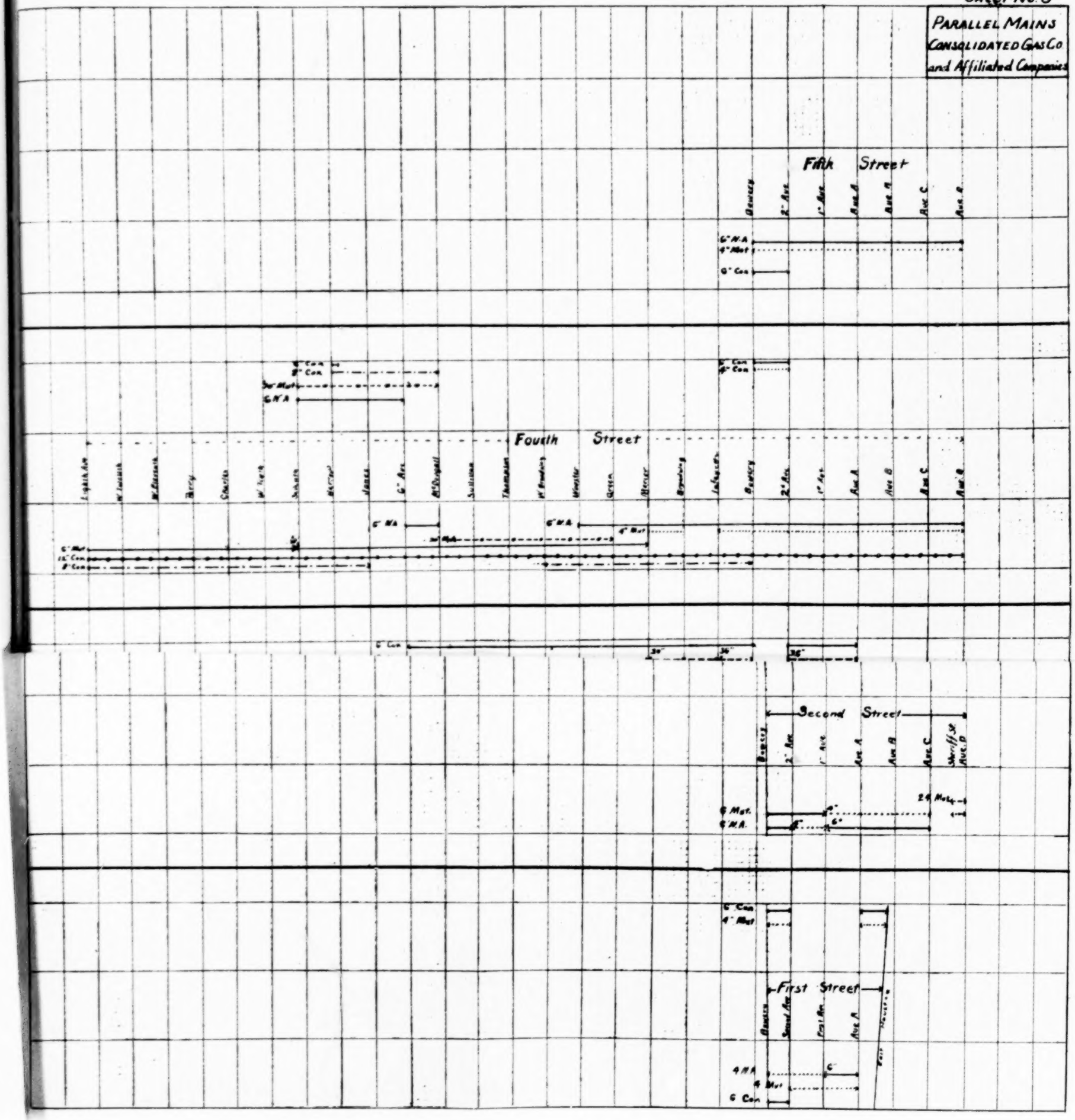
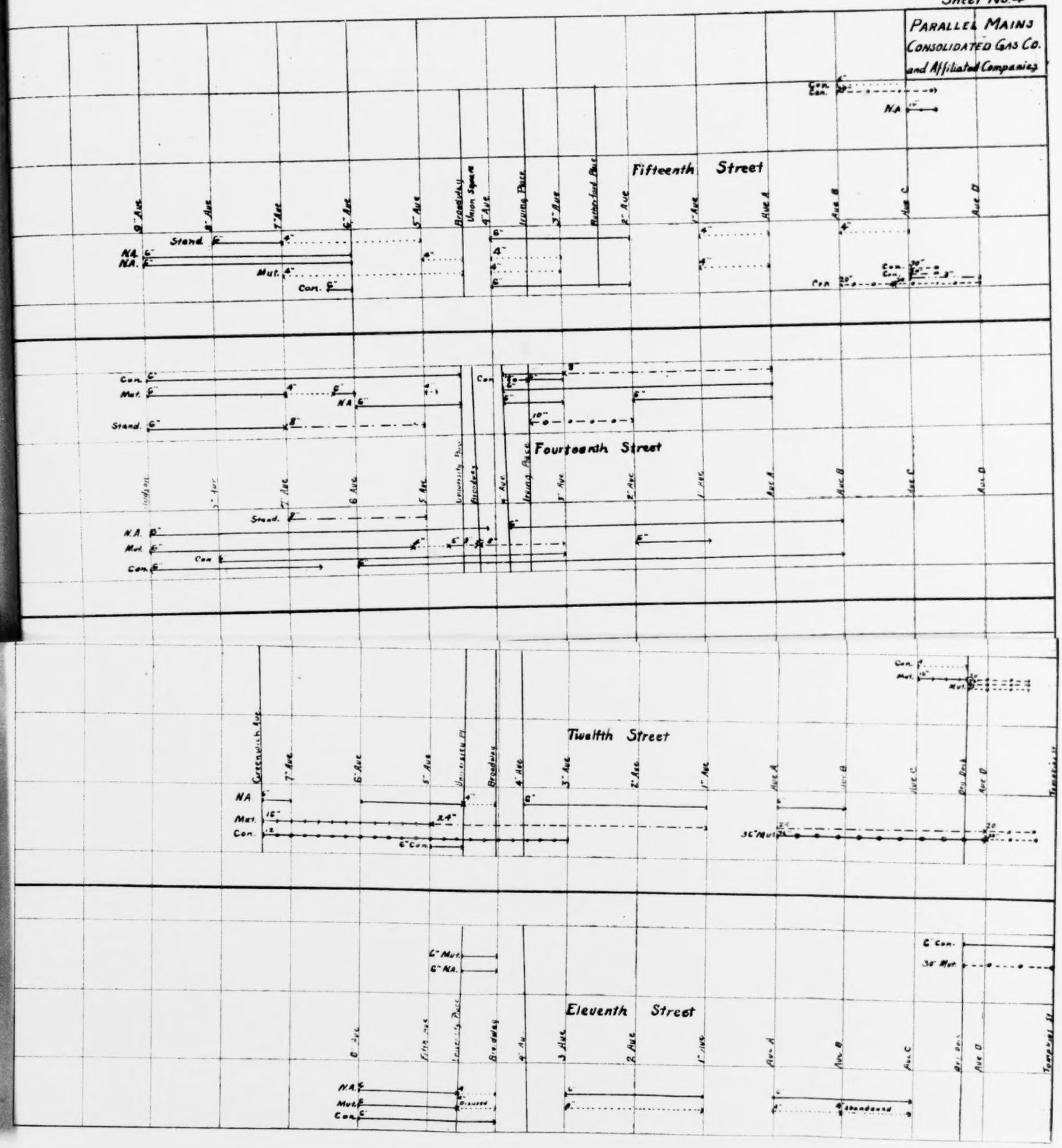


Table 232
Sheet No. 4

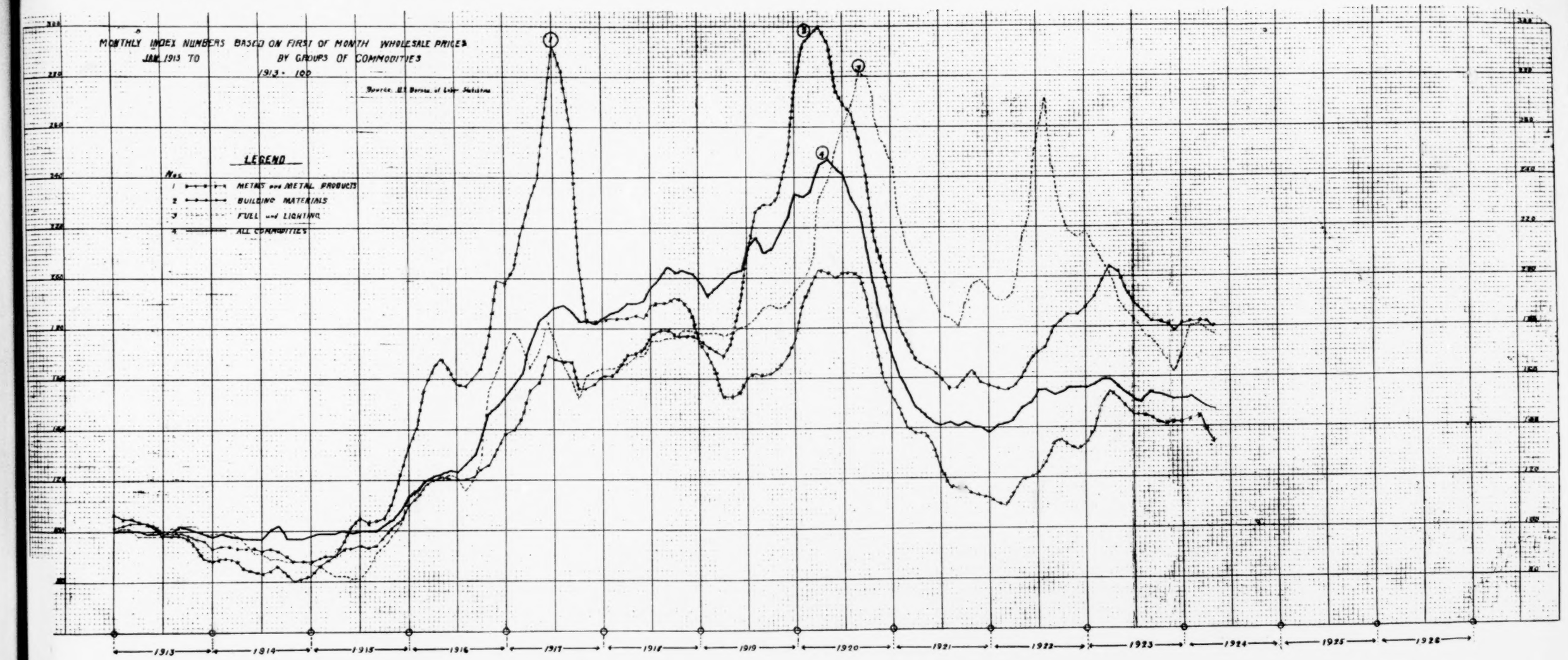
PARALLEL MAINS
CONSOLIDATED GAS CO.
and Affiliated Companies

Table 20C
Sheet No. 4

PARALLEL MAINS
CONSOLIDATED GAS CO. and Affiliated Companies



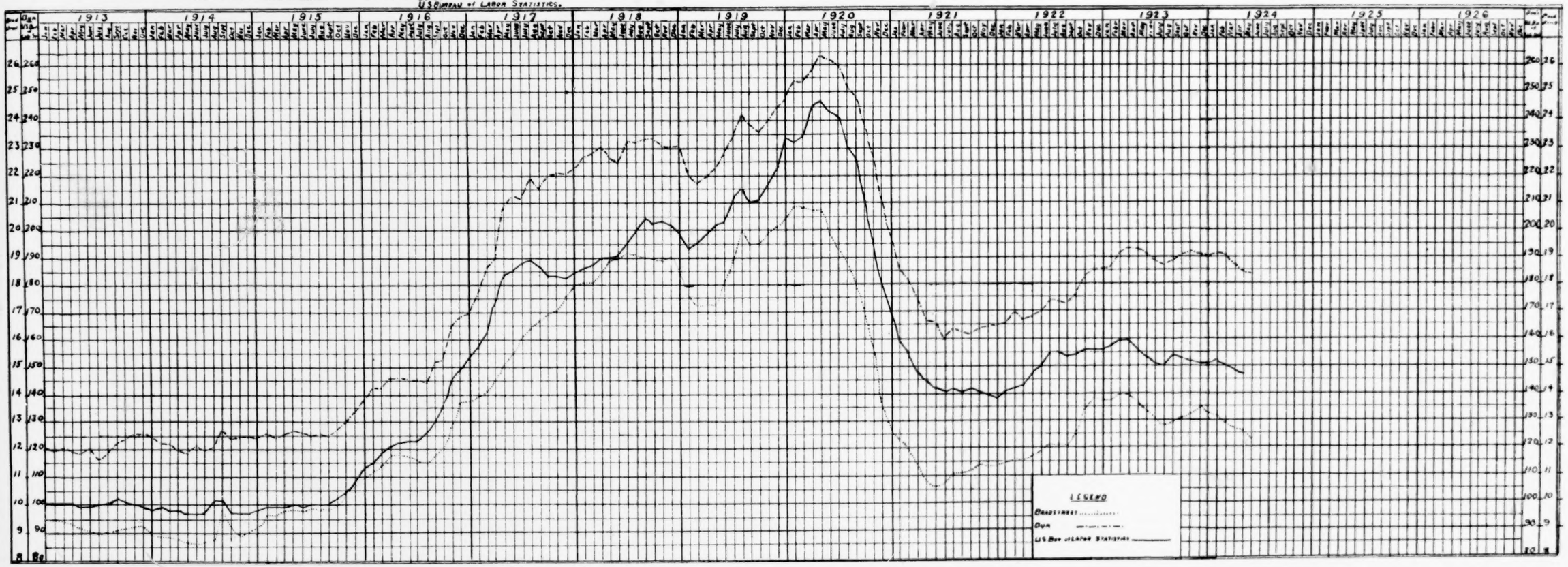
DEFENDANT'S EXHIBIT NO. 49



DEFENDANT'S EXHIBIT NO. 50

MONTHLY INDEX NUMBERS BASED ON FIRST OF MONTH PRICES

JAN 1913 To [redacted] Sources: Bradstreets. Dun's. U.S. Bureau of Labor Statistics.



votion which Mr. McHale has displayed in his work for this institution, and

Resolved, Further, that the Directors of the Bank convey their best wishes to Mr. McHale in his new field of usefulness to the people of the State of New York, and wish him every good fortune in his said work, and

Resolved, Further, that these resolutions be spread upon the minutes of this meeting, and that a copy thereof, suitably engrossed, be presented to Martin McHale, on behalf of the Directors of this Bank.

(Signed) F. L. Grant, President. Wm. H. Mills, Cashier.

(Here follow Defendants' Exhibits Nos. 49 and 50, marked side folio pages 4345 and 4346)

[fol. 4347]

DEFENDANT'S EXHIBIT No. 51

Consolidated Gas Co., 1919

301. Fixed Capital, December 31, 1908 (Account No. 100)

Show hereunder the particulars of the respondent's account of "Fixed Capital, Dec. 31, 1908," as it stood on the books of the respondent as of the beginning of the year, showing the debit balance of each of the subaccounts actually carried, and of the total account as of that date. Show also the total credits made to each sub-account during the year on account of withdrawals or retirements, and in the lower half of the page describe the property withdrawn or retired during the year, giving in connection with such description, the number of units retired, the particulars of date of installation, name of builder or maker, date of construction or erection, character of construction, size, capacity, style, etc. Equipment transferred from one location to another should not be included under withdrawals or retirements. The respondent, if both an electrical corporation and a gas corporation, should, so far as practicable, classify its fixed capital sub-accounts given hereunder as between electric, gas, and other departments.

Line No.	Name of sub-account (a)	Book cost at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost at close of year (d)	Remarks (e)
		$ c.	$ c.	$ c.	
1	Real Estate	$8,418,832 77	$93,918 00	$8,324,914 77	
2	Plant	12,580,503 81	341,303 73	12,239,200 08	
3	Street Mains	7,617,273 96	1,825 21	7,615,448 75	
4	Services	965,920 37	18,388 00	947,532 37	

5	Franchises & Rights	7,781,000 00	.....	7,781,000 00
6	Meters	2,994,026 39	22,565 25	2,971,461 14
7	Cocks & Connections	130,044 36	2,144 28	127,900 08
8	Tools & Implements	9,650 42	965 04	8,685 38
9	Office Furniture & Fixtures	10,105 22	.....	10,105 22
10	Scows	15,821 20	.....	15,821 20
11	Automobiles & Accessories	4,488 46	.....	4,488 46
12	Gas Stoves Rented	20,673 63	20,673 63	.....
	Total	40,548,340 59	501,783 14	40,046,557 45*

Description of Fixed Capital in Service December 31, 1908, and Withdrawn or Retired During the Year

(If the specific information herein required as to Fixed Capital retired during the year is given elsewhere in this report, it need not be repeated here, but may be embodied herein by appropriate citations.)

Withdrawals and retirements during the year as above	$501,783 14*
Withdrawals affecting Fixed Capital since December 31", 1908	$94,742 70*
	$596,525 84
Less Engineering & Superintendence, billed other Companies	39,202 44
Withdrawals during the year shown on page #27	$557,323 40*

[fol. 4348] 305. Fixed Capital Installed Since December 31, 1908.—A. Electric

P. S. C. Report—Page 20

Withdrawals from Fixed Capital—12/31/1908

Real Estate:		
West 18th St. Property—Sold	60,000 00	
" 45th St. " "	25,300 00	
421 East 60th St. (Frame Structure)	6,118 00	
44th St. Station—Adjustment	2,500 00	
		93,918 00
Plant—14th St. Station:		
2 Holders	116,364 00	
Connections	5,050 00	
21st St. Station:		
Water Heater	4,359 24	
18th St. Station:		
Fence	230 00	
42nd St. Station:		
Three (3) Holder Tanks	90,000 00	
Three (3) Gas Holders	67,500 00	
Governor and Valve House	3,500 00	

Governor	2,100 00	
Valves—etc.	843 00	
Meter House	1,200 00	
Station Meter	1,800 00	
Connections	2,500 00	
99th St. Station:		
Shells of 300 M cu. ft. Holder	20,000 00	
Inwood Station:		
Holder and Accessories	28,357 49	
44th St. Station:		
Adjustment	2,500 00	
		341,303 75
Streets Mains—Renewals & Repl.	1,768 96	
Salvage	56 25	
		1,825 21
Services—Renewals & Replacements		18,388 00
Meters—Renewals & Replacements		22,565 25
Cocks & Connections—Renewals & Replacements		2,144 28
Tools & Implements—Renewals & Replacement		965 04
Gas Appliance Rented		20,673 63
		501,783 14

[fol. 4349] Fixed Capital Installed Since December 31, 1908.—B. Gas Department, General Departments and Other Departments

Show hereunder in accordance with the instructions on page 21 the expenditures for plant and equipment made by the respondent during the year in its gas department, classified in accordance with the provisions of the Uniform System of Accounts for Gas Corporations, all credits made to these accounts during the year because of withdrawals or retirements of capital installed since December 31, 1908, and the balances in the several accounts at the beginning and the close of the year. If the respondent has both a gas and an electric department, below the total of gas capital show in similar form its expenditures for general capital (i. e. applicable to two or more departments) such as organization, general structures, general equipment, etc. Show also the expenditures made upon fixed capital in respondent's street railroad, natural gas, water, and other similarly classified and the balances as above provided, classifying the same into intangible and tangible capital.

Change Captions of Columns C, D, and E, to read thus: (C) Installed during the year; (D) Adjustments-debits; (E) Adjustments-credits; to be interpreted in accordance with the revised directions to Schedule 305.

Line No.						
1						
2	Land	Occupied by gas works (110a)	21,027 10	9,397 70	.....	30,424 80
3		Occupied by outside holder stations (110b)	368,259 10	11,105 65	.....	379,364 75
4		Water rights (110c)	.....	.....	.....	.....
5		Other land (110d)	1,010,796 49	.....	.....	1,010,796 49

6	Intangible	Organization (101)				
7		Franchises (gas) (102)				
8		Patent rights (gas) 103)				
9		Other intangible gas capital (104)				
10	Tangible Gas Capita.	General structures (121)	3,054,578 19	19,388 66	564 80	3,073,402 05
11		General equipment (122)	781,021 00	18,788 49	29,447 65	770,361 84
12		Works and station structures (221)	622,987 22	6,845 99		629,833 21
13		Holders (222)	688,874 64			688,874 64
14		Furnaces, boilers and accessories (141a)	76,370 15	44,198 22		120,568 37
15		Steam engines (141b)	41,053 08			41,053 08
16		Gas engines (143b)				
17		Miscellaneous power plant equipment (145)	2,961 69			2,961 69
18		Benches and retorts (223)				
19		Water gas sets and accessories (143a)	22,336 97	5 41		22,342 38
20		Purification apparatus (224)	61,868 56	19,294 40	241 73	80,921 23
21		Accessory equipment works (225)	290,013 05	28,834 18		318,847 23
22		Trunk lines and mains (231)	3,409,992 28	13,140 00	2,683 02	3,420,449 26
23		Gas services (232)	306,321 37	41,232 43	285 79	347,268 01
24		Gas meters (233)	725,415 73	138,749 50	888 10	863,277 13
25		Gas meter installation (234)				
26		Municipal street lighting fixtures (235)				
27		Gas engines and appliances (236)	1,691,261 83	535,889 66	15,751 50	2,211,399 99
28		Gas tools and implements (237)	16,041 24	1,264 65	2,023 62	15,282 27

Fixed Capital Installed Since December 31, 1908—Cont'd

29	Tangible Gas Capita	Gas laboratory equipment (238)	14,693.13	1,666.33	1,489.01	14,870.45
30		Other tangible gas capital (239)	233,745.34	11,422.62	2,165.04	243,002.92
31		Engineering and superintendence (281)	211,047.65	63,646.94	39,202.44	235,492.15
32		Law expenditures during construction (282)				
33		Injuries during construction (283)				
34		Taxes during construction (284)				
35		Interest during construction (285)	16,980.91	86.97		17,067.88
36		Miscellaneous construction expenditures (286)				
37		Total	13,633,684.90	964,783.86	94,742.70	14,503,726.06
38		307. General Capital				
39		Organization (101)				
40		General structures (121)		Not Applicable		
41		General equipment (121)				
42						
43		Total				
44		308. Other Departments				
45		Street and Interurban railroad — Intangible				
46		Street and Interurban railroad — Tangible				
47		District steam heating — Intangible		Not Applicable		
48		District steam heating — Tangible				
49						
50						
51		Total				

[fol. 4350] P. S. C. Report—Page 22

Fixed Capital Installed Since Dec. 31, 1908

Additions During the Year, 1919

Land Devoted to Gas Operations:

Occupied by Gas Works: Assessments—		
99th St. Station		9,397 70
Occupied by Outside Holder Stations:		
Assessments — Kingsbridge Station	10,197 00	
" Inwood Station	908 65	
		11,105 65
		20,503 35

For detail of investment in Plant and Equipment see Statement attached to page #25 of this report.

Q. Page 23, schedule 314, and page 25.—Does not respondent carry on its books the balance sheet accounts "Work in progress" or "Unfinished construction"? If not, please explain how the system followed meets the requirements of the Commission's order of June 29, 1917, in Case No. 578. The detail reported on page 25 is incomplete and unsatisfactory. Where a work order involves the installation of a large unit it should be described so as to enable identification and in the case of jobs involving replacement of fixed capital the credits as well as the charges should be shown. The item of $535,889.66 for gas engines and appliances can certainly be shown in more detail. If respondent's records are kept in accordance with the Uniform System of Accounts as modified by order of June 29, 1917, the necessary data should be available.

A. This Company was not engaged during the year 1919 in the performance of any important construction project or job. The item of $535,889.66 represents the net increase during the year 1919 of the Company's investment in gas appliances rented on the district.

Correction authorized in respondent's letter of June 28, 1920.

[fol. 4351] P. S. C. Report—Page 22

Fixed Capital Installed since Dec. 31, 1908

Withdrawals during 1919

General Structures:				
G. O. Building—Plumbing—Renewals & Replacements			514 80	
Sold			50 00	
				564 80
General Equipment:				
General Stable Equipment—Renewals & Replacements			745 00	
" " " Sold			53 50	
" " " Transferred to M. & S.			136 00	
Autos & Accessories—Renewals & Replacements			15,310 06	
" " Sold			1,045 00	
Tools & Implements—Renewals & Repl.		15,070 36		
Less " " " Works		1,918 22		
" " " " Laboratory		1,489 01		
		3,618 03	11,663 13	
Tools & Impls.—St. Dept. & Shops—Sold		431 23		
Transferred M. & S.		63 73		
			494 96	
				29,447 65

Plant:		
Purification Apparatus—Tar Separator—Transf'd to M. & S.		241 73
Trunk Lines and Mains—Transferred to P. & S		2,683 02
Gas Services—Transferred to M. & S		285 79
Gas Meters—Renewals & Replacements		888 10
Gas Engines and Appliances		15,751 50
Gas Tools and Implements:		
Works—Renewals and Replacements	1,918 22	
Sold	105 40	
Laboratory—Renewals and Replacements	1,489 01	
		3,512 63
Other Tangible Gas Capital:		
Cocks and Connections—Sold		2,165 04
Engineering & Superintendence—Billed other Companies		39,202 44
		94,742 70

[fol. 4352] DEFENTANTS' EXHIBIT No. 52

Consolidated Gas Co., 1920

301. Fixed Capital December 31, 1908 (Account No. 100)

1. With respect to fixed capital in service on December 31, 1908, give hereunder in column (b) the book cost of that portion in service at the beginning of the year, in column (c) the book cost of all such property retired from service during the year and in column (d) the book cost of the property remaining in service at the close of the year, itemized in each case according to the accounts on the books at December 31, 1908, which were combined to make up the said account Fixed Capital, December 31, 1908. Give first electric capital, secondly, and thirdly, other departments, specifying each such department. Improvements on leased property should be shown separately.

Equipment and other property transferred from one location to gas capital, other should not be included under retirements.

No entries are required in this schedule on the part of corporations that have reclassified this account in accordance with the classifications prescribed for transactions subsequent to December 31, 1908, when such reclassification has received the approval of the Public Service Commission

Line No.	Name of sub-account (a)	Book cost of portion in service at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost of portion in service at close of year (d)	Remarks (e)
1	Real Estate	$8,324,914 77	$12,007 39	$8,312,907 38	
2	Plant	12,239,200 08	617,919 91	11,621,280 17	
3	Street Mains	7,615,448 75	40,848 56	7,574,600 19	
4	Services	947,532 37	26,792 00	920,740 37	

5	Franchise & Rights	7,781,000 00		7,781,000 00
6	Meters	2,971,461 14	16,764 50	2,954,696 64
7	Cock & Connections	127,900 08	1,735 42	126,164 66
8	Tools & Implements	8,685 38	868 54	7,816 84
9	Office Furniture & Fixtures	10,105 22		10,105 22
10	Scows	15,821 20		15,821 20
11	Automobiles & Accessories	4,488 46	3,426 72	1,061 74
	Total	40,046,557 45	720,363 04	39,326,194 41

2. State whether or not the book cost of the foregoing represents actual money cost or cost in terms of securities issued or assumed by respondent.

3. *Describe the property retired from service during the year, giving in particular the location, name of builder or maker, date of construction or erection, character of construction, cost, size, capacity, and the like. In case the records of the respondent do not disclose the actual cost of retired property, the estimated cost or ledger value should be stated in accordance with par. 15 of the modifying order, and the fact of estimation stated in a footnote. If the specific description of property retired during the year is given elsewhere in this report, it need not be repeated here but may be embodied herein by appropriate citations.

Withdrawals & Retirements during the year as above*	720,363 04
Withdrawals affecting Fixed Capital since December 31, 1908	99,370 31
	819,733 35
Less Engineering & Superintendence billed to other Companies	57,255 97
Withdrawals during the year shown on page 27	762,477 38

Consolidated Gas Co.—Correction authorized in respondent's letter of Nov. 1, 1921

Q. Page 20, inquiry 2. Please answer.
A. It represents both; but the cost in respect cannot be determined.

Consolidated Gas Co.—Correction authorized in respondent's letter of Nov. 1, 1921

Q. Page 20, inquiry 3. All detail here called for relative to property retired indicated in column C should be furnished.
A. Reference is made to our answers in re. Pages 27, 47, 48 and inquiries 2 and 4 pages 48, inquiries 2, 3, 4, 5 page 44, inquiries 2 and 3 page 45.

In schedules 306-308 on this page report the same particulars concerning cost of utility property other than electrical as those required on the preceding page for electrical property. If respondent supplies both gas and electricity, the cost of property used jointly in the two services should be given in schedule under 307—General Capital.

Line No.		Account (a)	Cash cost to beginning of year (b)	Installed within the year (c)	Retired from service in current year (d)	Adjustments (e)	Cash cost to close of year (f)
1		306. Gas Capital	$ c.	$ c.	$ c.	$ c.	$ c.
2	Intangible Land	Occupied by gas works (110a)	30,424 80	10,866 60	.....	.....	41,291 40
3		Occupied by outside holder stations (110b)	379,364 75	11,605 95	.....	.....	390,970 70
4		Water rights (110c)	.....	.....	.....	.....	1,014,533 04
5		Other land (110d)	1,010,796 49	3,736 55	.....	.....	.....
6	Intangible Gas Capital	Organization (101)	.....	26,209 10	.....	.....	.....
7		Franchises (gas) (102)	.....	.....	.....	.....	.....
8		Patent rights (gas) (103)	.....	.....	.....	.....	.....
9		Assessments (104)	.....	17,044 14	.....	.....	17,044 14
10	Tangible Gas Capital	General structures (121)	3,073,402 05	5,132 57	2,399 00	.....	3,076,135 62
11		General equipment (122)	770,361 84	51,433 21	23,039 67	.....	798,755 38
12		Works and station structures (221)	629,833 21	1,637 80	.....	.....	631,471 01
13		Holders (222)	688,874 64	.....	.....	.....	688,874 64
14		Furnaces, boilers and accessories (141a)	120,568 37	.....	.....	.....	120,568 37
15		Steam-engines (141b)	41,053 08	.....	.....	.....	41,053 08
16		Gas engines (143b)	.....	.....	.....	.....	.....
17		Miscellaneous power plant equipment (145)	2,961 69	.....	.....	.....	2,961 69
18		Benches and retorts (223)	.....	.....	.....	.....	.....
19		Water-gas sets and accessories (143a)	22,342 38	.....	.....	.....	22,342 38
20		Purification apparatus (224)	80,921 33	4,101 67	.....	.....	85,022 90
21		Accessory equipment at works (225)	318,847 23	68,770 74	.....	.....	387,617 97
22		Trunk lines and mains (231)	3,420,449 26	35,797 42	63 11	.....	3,456,183 57
23		Gas services (232)	347,268 01	99,263 06	53 78	.....	445,452 39
24		Gas meters (233)	863,277 13	81,720 00	561 15	.....	944,435 98
25		Gas-meter installation (234)	.....	.....	.....	.....	.....
26		Municipal street lighting fixtures (235)	.....	.....	.....	.....	.....
27		Gas engines and appliances (236)	2,211,399 99	597,573 19	10,426 47	.....	2,798,546 71
28		Gas tools and implements (237)	15,282 27	5,844 96	2,266 10	.....	18,861 13
29		Gas laboratory equipment (238)	14,870 45	3,936 38	1,733 75	.....	17,073 08
30		Other tangible gas capital (239)	243,002 92	20,367 68	1,027 53	.....	262,343 07
31		Engineering and superintendence (281)	235,492 15	22,667 08	.....	.....	258,159 23
32		Law expenditures during construction (282)	.....	.....	.....	.....	.....
33		Injuries during construction (283)	.....	.....	.....	.....	.....
34		Taxes during construction (284)	.....	.....	.....	.....	.....
35		Interest during construction (285)	17,067 88	193 07	.....	.....	17,260 95
36		Miscellaneous construction expenditures (286)	.....	.....	.....	.....	.....
37		Unfinished construction	.....	.....	.....	.....	.....
38		Total	14,503,726 06	1,040,325 93	41,615 46	.....	15,502,436 53
39		307. General Capital					
40		Organization (101)					
41		General structures (121)		Not Applicable			
42		General equipment (121)					
43							
44		Total					
45		308. Other Departments					
46		Street and interurban railroad (Intangible					
47		Street and interurban railroad (Tangible		Not Applicable			
48		District steam -eating (Intangible					
49		District steam -eating (Tangible					
50							
51							
52		Total					

Q. Page 22 (Insert on Page 23). The insert on page 23 indicates charges to repairs for items credited to Mains and Services; also charges to affiliated companies for credits to Engineering and Superintendence. Charges on account of projects that have not been completed or for expenditures which are to be later charged to other companies should not be made to permanent fixed capital accounts, but should be treated as provided in the order dated June 29, 1917, modifying the final order in Case 578. Detail called for on such items should be furnished on page 25, and on page 24 all the detail required of construction projects completed during the year should be stated.

A. The credits to Mains and Services represent adjustments which should have been deducted from the additions, and should not have been shown as withdrawals. Please amend the report accordingly.

Correction authorized in respondent's letter of January 30, 1922.

[fol. 4353] P. S. C. Report—Page 20

Withdrawals from Fixed Capital December 31st, 1908

Plant:

14th Street Station:

Mains about Works	$21,837 19	
Hydrants, Sewers & Culverts	16,165 00	
Steam Connections	11,210 61	
Coal Pockets & Machinery	21,546 49	
Gangway Shed	11,498 00	
Gas Engine House Apparatus	6,721 66	
Benches	275,968 80	
Tools & Misc. Machinery	14,842 91	
Connections	15,613 40	
Stoker House and Contents	10,107 46	
Discharging and Charging Machinery	54,305 21	
Air Condensers	20,700 00	
" " Foundations	2,120 00	
Coke Briquetting Plant	24,163 65	
Two (2) Condensers	24,381 72	
Tower Scrubbers	37,840 00	
" " Connections	1,418 00	
56' of 30" Connections	907 50	
Sundries	41,372 31	
		$612,719 91
42nd Street Station:		
Roofs #1 & 2 Coal Sheds		5,000 00
21st Street Station:		
Boiler Sold		200 00
		$617,919 91
Real Estate—East 15th Street Property sold		12,007 39
Street Mains		40,848 56
Services		26,792 00
Meters		16,764 50
Cocks & Connections		1,735 42
Tools & Implements		868 54
Automobile & Accessories		3,426 72
		$720,363 04

(Here follows side folio page 4354)

P. S. C. Report—Page 22

Fixed Capital Installed Since Dec. 31, 1908

Withdrawals during 1920

General Structures:			
57th St. Bldg. Heating & Ventilating	Transf'd to M. & S.	$625 00	
	Sold	1,064 40	
	Renewals & Replac'ts	709 60	
			$2,399 00
General Equipment:			
General Stable Equipment—	Sold	$175 00	
	Renewals & Replac'ts	1,083 00	
Automobiles & Accessories.	Sold	605 00	
	Renewals & Replace'ts	8,910 23	
Tools & Implements—Renewals & Replacements		$16,250 88	
Less Stations		$2,263 69	
" Laboratory		1,733 75	
		3,997 44	
		12,253 44	
Tools & Implements St. Dept. & Shops—	Sold	13 00	
			23,039 67
Trunk Lines & Mains—	Transferred to M. & S	63 11	63 11
	Charged to Repairs	*475 38	
			538 49
Gas Services—	Transferred to M. & S.	98 68	98 68
	Charged to Repairs	*23 50	
			*122 18

Gas Meters—Renewals & Replacements			561 15
Gas Engines and Appliances			10,426 47
Gas Tools & Implements:			
Works—Renewals and Replacements	2,263 69		
Transferred to M. & S.	2 41		
Laboratory—Renewals & Replacements	1,733 75		
			3,999 85
Other Tangible Gas Capital:			
Cocks and Connections—Sold	1,001 16		
Transferred to M. & S.	26 37		
			1,027 53
Engineering and Superintendence—Billed Affiliated Companies			$41,615 46
			*57,255 97
			*$99,370 31

Q. Page 23, lines 34 to 36. Please state the year in which fixed capital was credited on account of the withdrawal of these holders.

A. Yes 1919.

Correction authorized in respondent's letter of Nov. 1, 1921.

Q. Page 23, schedule 312. On page 59, inquiry 1, the amount of Real Estate Taxes capitalized is stated as $21,102.50. Please reconcile.

A. Real Estate Taxes Capitalized as shown on page 59	$21,102 50
Assessments in connection with sewer, West 46th St.	5,106 60
	$26,209 10

Correction authorized in respondent's letter of Nov. 1, 1921.

[*Figures erased in copy.]

[fol. 4356]

DEFENDANT'S EXHIBIT No. 53

Consolidated Gas Co., 1921

301. Fixed Capital, December 31, 1908 (Account No. 100)

1. With respect to fixed capital in service on December 31, 1908, give hereunder in column (b) the book cost of that portion in service at the beginning of the year, in column (c) the book cost of all such property retired from service during the year and in column (d) the book cost of the property remaining in service at the close of the year, itemized in each case according to the accounts on the books at December 31, 1908, which were combined to make up the said account Fixed Capital, December 31, 1908. Give first electric capital, secondly, gas capital, and, thirdly, other departments, specifying each such department. Improvements on leased property should be shown separately.

Equipment and other property transferred from one location to another should not be included under retirements.

No entries are required in this schedule on the part of corporations that have reclassified this account in accordance with the classifications prescribed for transactions subsequent to December 31, 1908, when such reclassification has received the approval of the Public Service Commission.

Line No.	Name of sub-account (a)	Book cost of portion in service at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost of portion in service at close of year (d)	Remarks (e)
1.	Real estate	$8,312,907 38	$136,365 62	$8,176,541 76	
2.	Plant	11,621,280 17	13,656 50	11,607,623 67	
3.	Street Mains	7,574,600 19	5,629 20	7,568,970 99	
4.	Services	920,740 37	23,182 00	897,558 37	

5. Franchises & Rights	7,781,000 00		7,781,000 00
6. Meters	2,954,696 64	88,525 23	2,866,171 41
7. Cocks & Connections	126,164 66	2,852 10	123,312 56
8. Tools & Implements	7,816 84	781 68	7,035 16
9. Office Furniture & Fixtures	10,105 22		10,105 22
10. Scows	15,821 20		15,821 20
11. Automobiles & Accessories	1,061 74		1,061 74
Total	39,326,194 41	270,992 33	39,055,202 08

2. State whether or not the book cost of the foregoing represents actual money cost or cost in terms of securities issued or assumed by respondent.

It represents costs; but the cost in respect of each cannot be determined.

3. Describe the property retired from service during the year, giving in particular the location, name of builder or maker, date of construction or erection, character of construction, cost, size, capacity, and the like. In case the records of the respondent do not disclose the actual cost of retired property, the estimated cost or ledger value should be stated in accordance with par. 15 of the modifying order, and the fact of estimation stated in a footnote. If the specific description of property retired during the year is given elsewhere in this report, it need not be repeated here but may be embodied herein by appropriate citations.

Withdrawals and Retirements during the year as above	$270,992 33
Withdrawals affecting Fixed Capital since December 31, 1908	103,130 08
Withdrawals during the year as shown on page #27	374,122 41

[fol. 4357] P. S. C. Report—Page 20

Withdrawals from Fixed Capital—December 31, 1908

Real Estate:		
116th St. & Lex. Ave.—Land Sold	$65,447 30	
Ave. "A" 60-61st Street—Land Sold	64,710 34	
Inwood Sta.—Land condemned and taken by N. Y. City	6,007 98	
Hester St. Branch Office—Heating Appar. Withdrawn	200 00	
		$136,365 62
Plant:		
14th Street Station:		
Tower Scrubbers		9,500 00
21st Street Station:		
48' of 10" Piping	130 00	
Salt Water Pump	865 00	
2—10½ x 12 Armington & Sims Horizontal Engine	1,950 00	
1—8¼ x 10 Hoisting Engine	1,211 50	
1—25 H. P. Vertical Boiler		
		4,156 50
		5,629 20
Street Mains		23,182 00
Services		

Fixed Capital Installed Since 1908—B. Gas Department, General Department and Other Departments.

In schedules 306-308 on this page report the same particulars concerning cost of utility property other than electrical as those required on the preceding page for electrical property. If respondent supplies both gas and electricity, the cost of property used jointly in the two services should be given in schedule under 307—General Capital.

Line No.		Account (a)	Cash cost to beginning of year (b)	Installed within the year (c)	Retired from service in current year (d)	Adjustments (e)	Cash cost to close of year (f)
1		306. Gas Capital	$ c.	$ c.	$ c.	$ c.	$ c.
2	Intangible Land	Occupied by gas works (110a)	41,291 40	20,861 98			62,153 38
3	Intangible Land	Occupied by outside holder stations (110b)	390,970 70	18,360 41			409,331 11
4	Intangible Land	Water rights (110c)		39,222 39			
5	Intangible Land	Other land (110d)	1,014,533 04		531 36		1,014,001 68
6	Intangible	Organization (101)					
7	Intangible	Franchises (gas) (102)					
8	Intangible	Patent rights (gas) (103)					
9	Intangible	Assessments	17,044 14	71 99			17,116 13
10	Tangible Gas Capital	General structures (121)	3,076,135 62	50,840 95	166 50		3,126,810 07
11	Tangible Gas Capital	General equipment (122)	798,755 38	70,125 36	18,927 43		849,953 31
12	Tangible Gas Capital	Works and station structures (221)	631,471 01	19,734 24			651,205 25
13	Tangible Gas Capital	Holders (222)	688,874 64				688,874 64
14	Tangible Gas Capital	Furnaces, boilers and accessories (141a)	120,568 37	4,803 42			125,371 79
15	Tangible Gas Capital	Steam-engines (141b)	41,053 08				41,053 08
16	Tangible Gas Capital	Gas engines (143b)					
17	Tangible Gas Capital	Miscellaneous power plant equipment (145)	2,961 69				2,961 69
18	Tangible Gas Capital	Benches and retorts (223)					
19	Tangible Gas Capital	Water-gas sets and accessories (143a)	22,342 38	1,773 49			24,115 87
20	Tangible Gas Capital	Purification apparatus (224)	85,022 90	1,555 17			86,578 07
21	Tangible Gas Capital	Accessory equipment at works (225)	387,617 97	51,870 70		136 67	439,352 00
22	Tangible Gas Capital	Trunk lines and mains (231)	3,456,183 57	34,526 46			3,490,710 03
23	Tangible Gas Capital	Gas services (232)	445,452 39	90,225 30			535,677 69
24	Tangible Gas Capital	Gas meters (233)	944,435 98	104,518 00	2,415 00		1,046,538 98
25	Tangible Gas Capital	Gas-meter installation (234)					
26	Tangible Gas Capital	Municipal street lighting fixtures (235)					
27	Tangible Gas Capital	Gas engines and appliances (236)	2,798,546 71	276,104 30	76,235 13		2,998,415 88
28	Tangible Gas Capital	Gas tools and implements (237)	18,861 13	2,292 42	2,266 57		18,886 98
29	Tangible Gas Capital	Gas laboratory equipment (238)	17,073 08	4,231 08	2,060 89		19,243 27
30	Tangible Gas Capital	Other tangible gas capital (239)	262,343 07	12,798 09	527 20		274,613 96
31	Tangible Gas Capital	Engineering and superintendence (281)	258,159 23	29,729 63			287,888 86
32	Tangible Gas Capital	Law expenditures during construction (282)					
33	Tangible Gas Capital	Injuries during construction (283)					
34	Tangible Gas Capital	Taxes during construction (284)					
35	Tangible Gas Capital	Interest during construction (285)	17,260 95*	2,754 69			20,015 64
36	Tangible Gas Capital	Miscellaneous construction expenditures (286)					
37	Tangible Gas Capital	Unfinished construction					
38		Total	15,502,436 53	791,668 30	103,130 08	136 67	16,190,838 08
39		307. General Capital					
40		Organization (101)					
41		General structures (121)					
42		General equipment (121)					
43							
44		Total					
45		308. Other Departments					
46		Street and interurban railroad (Intangible)					
47		Street and interurban railroad (Tangible)					
48		District steam -eating (Intangible)					
49		District steam -eating (Tangible)					
50							
51							
52		Total					

*Represents cash discounts secured for prompt payment of creditors' bills applicable to construction projects.

Meters	88,525 23
Cocks and Connections	2,852 10
Tools and Implements	781 68
	$270,992 33

(Here follows side folio page 4358)

[fol. 4359] P. S. C. Report—Page 22

Fixed Capital Since Dec. 31, 1908

Withdrawals during 1921

Other Land:			
Real Estate Assessments for Local Improvements since Jan. 1, 1909 upon property sold—116th St. & Lexington Avenue and Avenue A and 60th Street			$531.36
General Structures:			
57th St. Building—2—#400 Kompak Water Heaters—Renewals & Replacements			166.50
General Equipment:			
General Stable Equipment—Sold		$390.00	
Renewals & Replacements		1,597.50	
Automobiles & Accessories—Sold		1,000.00	
Renewals & Replacements		2,176.45	
Tools & Implements—Renewals & Replacements	$17,551.17		
Less: Stations $2,266.57			
Laboratory 1,974.89			
	4,241.46		
		13,309.71	

Tools & Implements—St. Depts. & Shop—Sold	172.35		
" Transfd.			
to M. & S.)	130.92		
" Engineering Dept.—Sold	150.50		
		453.77	
			18,927.43
Gas Meters			2,415.00
Gas Engines & Appliances—Transferred to Material Supplies		42,260.13	
Sold		23,943.34	
Renewals & Replacements		10,031.66	
			76,235.13
Gas Tools & Implements—Renewals & Replacements			2,266.57
Gas Laboratory Equipment—Renewals & Replacements		1,974.89	
Sold		86.00	
			2,060.89
Other Tangible Gas Capital—Sold		433.24	
Transferred to Material & Supplies		93.96	
			527.20
Total			$103,130.08

[fol. 4360] DEFENDANT'S EXHIBIT No. 54

Consolidated Gas Company of New York

Fixed Capital—Additions and Retirements

1919 to 1923, Inclusive

Account	Balance Dec. 31, 1919	Additions for five year period	Retirements for five year period	Balance Dec. 31, 1923
Fixed Capital—Dec. 31, 1906	$40,548,340	.....	$7,143,548	$33,404,792
Land Occupied by Gas Works	21,027	$4,037,070	169	4,057,928
Land Occupied by Outside Holder Stations	368,259	63,079	.....	431,338
Other Land	1,010,796	240,767	35,407	1,216,156
Organization	.....	615,143	.....	615,143
Assessments	.....	20,519	.....	20,519
Other Intangible Gas Capital	.....	1,009,970	.....	1,009,970
General Structures	3,054,578	164,044	5,435	3,213,187
General Equipment	781,021	414,739	189,543	1,006,217
Works & Station Structures	622,988	938,060	23,723	1,537,325
Holders	688,875	1,747,695	150	2,436,420
Furnaces, Boilers & Accessories	76,370	311,783	2,550	385,603
Steam Engines	41,053	969	.....	42,022
Misc. Power Plant Equipment	2,962	13,984	661	16,285
Water Gas Sets & Accessories	22,337	341,619	.....	363,956

DEFENDANTS' EXHIBIT NO. 58

STATE TAX DEPARTMENT

Form S

1. PROPERTY SCHEDULE—Summary of Assessed Values.

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent at close of year.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Property Used During the Year in Connection with Operation of Special Franchises: Land	Land with improvements	Remarks Respondent not to use this space	Property Not Used During the Year in Connection with Operation of Special Franchises: Land	Land with improvements	Remarks Respondent not to use this space
1	Manhattan				$	$		$	$	
2	East 11th Station		368	1	375.000	416.000				
3			369	1	300.000	1.609.000				
4				10	6.000	6.000				
5				11	1.000	1.000				
6				12	7.500	7.500				
7				13	4.000	4.000				
8				14	42.500	50.000				
9				15	48.000	48.000				
10			382	22	300.000	1.730.000				
11					1.084.000	7.596.500				
12	East 14th Station		982	13	335.000	386.000	✓			
13			985	7	195.000	195.000	✓			
14				19	7.000	7.000	✓			
15				20	7.000	7.000	✓			
16				39	7.500	7.500	✓			
17				40	7.500	7.500	✓			
18			988	1	415.000	1.542.500	✓			
19			989	1	169.000	491.500	✓			
20			994	1	180.000	181.000	✓			
21				47	67.000	67.000	✓			
22					1.390.000	2.890.000	✓			
23	East 18th Station		690	40			✓	12.500	12.500	
24			691	11			✓	238.000	240.000	1
25			715	59			✓	105.000	190.000	✓
26								356.500	442.500	
27	East 21st Station		951	35	53.000	60.000	✓			
28			952	7	300.000	500.000	✓			
29				29	11.000	11.000	✓			
30				30	26.000	31.000	✓			
31				33	8.000	9.500	✓			
32				34	6.500	9.500	✓			
33				35	35.500	57.000	✓			
34			953	1	550.000	675.000	✓			
35			978	1	10.500	16.000	✓			
36				2	7.500	13.000	✓			
37				3	7.500	12.000	✓			
38				4	7.500	10.000	✓			
39				5	17.000	23.500	✓			
40				6	422.000	694.000	✓			
41			979	1	477.000	2.000.000	✓			
42		Totals (Increase Decrease)			$ 1.939.000	$ 4.522.500		$ 356.500	$ 442.500	

4364

Purification Apparatus	61,868	792,097	800	853,165
Accessory Equipment at wks.	290,014	895,681	62,397	1,123,298
Trunk Lines & Mains	3,409,993	2,784,250	2,746	6,191,497
Gas Services	306,321	883,397	385	1,189,333
Gas Meters	725,416	1,125,814	12,090	1,839,140
Gas Engines & Appliances	1,691,261	2,199,471	229,076	3,661,656
Gas Tools & Implements	16,041	38,651	17,169	37,523
Gas Laboratory Equipment	14,693	25,737	16,008	24,422
Other Tangible Gas Capital	233,745	111,724	4,772	340,697
Unamortized Investment in Plant	.....	1,193,908	.....	1,193,908
Engineer & Superintendence	211,049	241,242	39,202	413,089
Taxes During Construction	.....	33,922	.....	33,922
Interest During Construction	R-16,981	R-14,673	.....	R-31,654
Miscellaneous Construction Expenditures	.....	63,328	.....	63,328
Unfinished Construction	.....	456,903	.....	456,903
	$54,182,026	$20,750,893	$7,785,831	$67,147,088

[fol. 4361]

DEFENDANTS' EXHIBIT No. 55

Consolidated Gas Company of New York

Fixed Capital Additions, 1919 to 1923, Inclusive

Account—Name	1919	1920	1921	1922	1923	Total
Fixed Capital, Dec. 31, 1908	.....	.....	.....	.....	.....	.....
Land occupied by gas works	$9,398	$10,867	$20,862	$1,727,536 (A)	$2,268,407	$4,037,070
Land occupied by outside holder stations	11,106	11,606	18,360	.....	22,007	63,079
Other land	.....	3,737	.....	29,255 (B)	207,775	240,767
Organization	.....	.....	.....	168,597	446,546	615,143
Assessments	.....	17,044	72	2,606	797	20,519
Other intangible gas capital	.....	.....	.....	1,009,970	.....	1,009,970
General Structures	19,389	5,132	56,841	76,479 (C)	12,203	164,044
General Equipment	18,788	51,434	70,126	143,869	130,522	414,739
Works and Station Structures	6,846	1,638	19,734	838,061	71,781	938,060
Holders	.....	.....	.....	1,645,982	101,713	1,747,695
Furnaces, Boilers and Accessories	44,198	.....	4,803	224,687	38,095	311,783
Steam Engines	.....	.....	.....	969	.....	969
Miscellaneous Power Plant Equipment	.....	.....	.....	13,984	.....	13,984
Water-gas Sets and Accessories	5	.....	1,774	305,046	34,794	341,619
Purification Apparatus	19,294	4,102	1,555	561,967	205,179	792,097
Accessory Equipment at Works	28,834	68,771	51,871	415,058	331,147	895,681
Trunk Lines and Mains	13,140	35,797	34,527	2,640,721	60,065	2,784,250
Gas Services	41,232	98,284	90,225	542,480	111,176	883,397
Gas Meters	138,750	81,720	104,517	559,249	241,578	1,125,814
Gas engines and appliances	535,889	597,573	276,104	536,949	252,956	2,199,471
Gas Tools and Implements	1,265	5,845	2,293	10,252	18,996	38,651

Gas Laboratory equipment	1,666	3,936	4,231	7,961	7,943	25,737
Other tangible gas capital	11,423	20,367	12,798	46,828	20,308	111,724
Unamortized investment in plant	.....	.....	.....	.....	1,193,908	1,193,908
Engineering and superintendence	63,647	22,667	29,729	52,591	72,608	241,242
Taxes during construction	.....	.....	.....	.....	33,922	33,922
Interest during construction	R-87	R-183	R-2,755	R-5,029	R-6,609	R-14,673
Miscellaneous Construction Expenditures	.....	.....	.....	.....	63,328	83,328
Unfinished Construction	.....	.....	.....	.....	456,903	456,903
Total	$964,783	$1,040,327	$791,667	$11,556,068	$6,398,048	$20,750,893

A—Includes adjustment (deductions) of $36,000.
B— " " (additions) of $26,033.
C— " " " " $9,967.

[fol. 4362]

DEFENDANTS' EXHIBIT No. 56

Consolidated Gas Company of New York

Fixed Capital

Retirements, 1919 to 1923, Inclusive

Account	1919	1920	1921	1922	1923	Total
Fixed Capital Installed Prior to Dec. 31, 1908 (Sched. C)	$501,783	$720,362	$270,992	$1,015,945	$4,634,466	$7,143,548
Land Occupied by Gas Works.	.....	.....	.....	169	.....	169
Land Occupied by Outside....	.....	.....	.....	.....	.....	.....
Holder Stations.....	.....	.....	.....	.....	.....	.....
Other Land.....	.....	.....	531	.....	34,876	35,407
General Structures.....	565	2,399	167	280	2,024	5,435
General Equipment.....	29,448	23,040	18,927	62,903	55,225	189,543
Works & Station Structures...	.....	.....	.....	1,563	22,160-A	23,723
Holders	.....	.....	.....	150	.....	150
Furnaces, Boilers & Accessories.	.....	.....	.....	690	1,860-B	2,550
Steam Engines.....	.....	.....	.....	.....	.....	.....
Misc. Power Plant Equipment..	.....	.....	.....	.....	661-C	661
Water Gas Sets & Accessories..	.....	.....	.....	.....	.....	.....
Purification Apparatus.....	242	.....	.....	.....	558	800
Accessory Equipment at Works.	.....	.....	137	427	61,833-D	62,397
Trunk Lines & Mains.....	2,683	63	.....	.....	.....	2,746

Gas Services	286	99	.....	.....	.....	385
Gas Meters	888	561	2,415	3,824	4,402	12,090
Gas Engines & Appliances	15,751	10,426	76,235	31,664	95,000	299,076
Gas Tools and Implements	2,024	2,266	2,267	3,065	7,547	17,169
Gas Laboratory Equipment	1,489	1,734	2,061	4,969	5,755	16,008
Other Tangible Gas Capital	2,165	1,027	527	640	413	4,772
Engineering and Superintendence	39,202	.....	.....	.....	.....	39,202
Interest During Construction	.....	.....	.....	.....	.....	.....
Total	$596,526	$761,977	$374,259	$1,126,289	$4,926,780	$7,785,831

A—Includes an adjustment of $1,623 (increase).
B—Includes an adjustment of $543 (increase).
C—Includes an adjustment of $661.
D—Includes an adjustment of $7,736 (increase).
E—Adjustment.

[fol. 4363]

DEFENDANTS' EXHIBIT No. 57

Consolidated Gas Company of New York

Fixed Capital Installed Prior to December 31, 1908

Retirements

Account	1919	1920	1921	1922	1923	Total
Real Estate	$93,918	$12,007	$136,366	$148,400	$2,445,909	$2,836,600
Plant	341,304	617,920	13,655	511,279	738,236 1,257,997 (a)	3,480,391
Street Mains	1,825	40,849	5,629	185,108	17,481	250,892
Services	18,388	26,792	23,182	27,213	38,238	133,813
Franchises & Rights	.....	.....	.....	.....	.....	.....
Meters	22,565	16,764	88,526	134,593	132,759	395,207
Cocks & Connections	2,144	1,735	2,853	3,686	2,946	13,364
Tools & Implements	965	869	781	704	900	4,219
Office Furniture & Fixtures	.....	.....	.....	.....	.....	.....
Scows	.....	.....	.....	3,900	.....	3,900
Automobiles & Accessories	.....	3,426	.....	1,062	.....	4,488
Gas Stoves Rented	20,674	.....	.....	.....	.....	20,674
Total	$501,783	$720,362	$270,992	$1,015,945	$4,634,466	$7,143,548

(a) This item represents a transfer to Unamortized Investment in Plant.

(Here follows Defendants' Exhibit No. 58, marked side folio pages 4364, 4365, 4366 and 4367, 4368, 4369, 4370-4389.

1. PROPERTY SCHEDULE—Summary of Assessed Values (Concluded).

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent at close of year.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Property Used During the Year in Connection with Operation of Special Franchise: Land	Land with improvements	Remarks Respondent not to use this space	Property Not Used During the Year in Connection with Operation of Special Franchise: Land	Land with improvements	Remarks Respondent not to use this space
1			Brought Forward		$ 1.939.000	$ 4522500	✓	$ 356.500	$ 443500	
2	East 21st St Station (Cont'd)		979	27	7.000	7.000	✓			
3			967	37	115.000	187.000	✓			
4					2051.000	4716.500				
5	West 42nd St Station		1089	1	1.150.000	2.750.000	✓			
6			1090	23	100.000	105.000	✓			
7			1107	7	400.000	435.000	✓			
8					1.650.000	3290.000				
9	West 96th St Station		1092	7	450.000	550.000				
10				28	11.500	11.500	✓			
11				38	6.000	9.000	✓			
12				38½	8.000	9.000	✓			
13				39	8.000	9.000	✓			
14			1093	9	315.000	430.000	✓			
15					800.500	1018.500				
16	East 63rd St Station		1455	13	115.000	117.000	✓			Mortuary Garage
17			1467	6	1465.000	720.000	✓			
18			1476	26	20.000	20.500				
19					280.000	857.500				
20	West 65th St Station		1156	45	10.000	25.000	✓			
21				46	30.000	80.000	✓			
22			1157	1	950.000	1.650.000	✓			
23					993.000	1.755.000				
24	East 99th St Station		1670	1	542.500	1.202.000	✓			
25			1692	1	240.000	245.000	✓			
26					782.500	1447.000				
27	East 111th St Station		1682	8	10.000	10.000	✓			
28				11	412.500	967.500	✓			
29			1683	18	60.000	81.000	✓			
30				36	7.000	7.000	✓			
31				35	7.000	7.000	✓			
32			1704	5	355.000	412.000	✓			
33			1712	2	52.500	52.500	✓			
34					926.000	1.587.000				
35	West 132nd St Station		1998	50	22.000	55.000	✓			
36				51	7.000	7.000	✓			
37				52	7.000	7.000	✓			
38				55	7.000	7.000	✓			
39				56	7.000	7.000	✓			
40			1999	1	165.000	880.000	✓			
41					216.000	963.000				
42				Totals	$ 6.170.000	$ 26.071.000		$ 356.500	$ 443.500	

STATE TAX DEPARTMENT

Form S

1. PROPERTY SCHEDULE—Summary of Assessed Values.

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent at close of year.

Line No.	LOCATION: Borough	Section or ward	Block number	Plat or lot number	ASSESSED VALUES AS PER LAST ASSESSMENT MADE — Property Used During the Year in Connection with Operation of Special Franchises: Land	Land with improvements	Remarks (Respondent not to use this space)	Property Not Used During the Year in Connection with Operation of Special Franchises: Land	Land with improvements	Remarks (Respondent not to use this space)
1					$10,170.000	$26071.000		$ 356.500	$ 443.500	
2	Fremont Station		2175	15	14.000	15.000	✓			
3				18	24.000	24.000	✓			
4				22	25.000	25.000	✓			
5				100	29.000	29.000	✓			
6				124	5.000	5.000	✓			
7					97.000	98.000				
8	Eastern Elizabeth Av.		239	1	90.000	125.000				
9				5	27.000	50.000				
10				7	17.500	45.000				
11					144.500	220.000				
12	Spring Pl. 15th St.		670	47	21.000	36.000	✓			
13				60	410.000	2.800.000	✓			
14					431.000	2.836.000				
15	212 West 57th St.		1028	38	520.000	700.000	✓ X			
16										
17	66th St. West End Ave.		1177	21	320.000	355.000	✓			
18										
19	114th St. & 3rd Ave.		1642	33	48.000	95.000	✓			
20										
21	474 West 159th St.		2108	23	21.000	59.000	✓			
22										
23	166th St. & Amsterdam Ave.		2123	48	15.500	15.500	✓			
24				49	9.500	10.000	✓			
25				50	9.500	9.500	✓			
26				51	9.500	9.500	✓			
27					44.000	44.500				
28	Total Manhattan				11.795.500	30.476.500				
29										
30	Bronx									
31	East 132nd Locust Ave.	✓	2563	36	100.000	105.000				
32	Kingsbridge Station		3236	1	200.000	1.102.000				
33					300.000	1.207.000				
34										
35	Brooklyn									
36	East 21st St.		2164	1	50.200	70.000				
37										
38										
39										
40										
41										
42		Total (Entire Company Assessed)			$12.145.700	$31.755.500		$ 356.500	$ 443.500	

STATE TAX DEPARTMENT

2. PROPERTY SCHEDULE—Comparative Summary

Form S

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent at close of year.

Line No.	LOCATION: Street and street number	Section or ward	Block number	Plot or lot number	CLASS OF PROPERTY: Land other than Private Rights of Way: Book value	Land other than Private Rights of Way: Present value allowing depreciation	Buildings Contents: Reproduction cost new	Buildings Contents: Present value allowing depreciation	Machinery or Other Apparatus: Reproduction cost new	Machinery or Other Apparatus: Present value allowing depreciation	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Land	Buildings Contents	Apparatus	Total
1	East 11th Station		366	1		538,616.00	1,756,476.48	1,756,476.48						
2			369	1,10,15	1,755,506.00	802,671.00	836,670.11	836,670.11						
3			382	22		414,218.00	944,081.50	944,081.50						
4														
5														
6														
7					1,755,506.00	1,755,506.00	3,537,228.09	3,537,228.09			1,084,000	6,512,500		7,596,500
8	East 14th Station		982	13										
9			985	7,17,20 19,40		375,000.00	86,260.98	86,260.98						
10			981	1		222,500.00	18,476.80	18,476.80						
11			989	1	1,769,374.04	500,000.00	360,998.50	360,998.50						
12			991	1-47		20,000.00	697,961.96	697,961.96						
13	Property taken by the City of New York, contest					328,000.00	6,976.82	6,976.82						
14	condemnation as yet to the Company, since the					*	50,829.84	50,829.84						
15	beginning of certain condemnation proceedings													
16					1,769,374.04	1,667,000.00	1,211,469.70	1,211,469.70			1,390,000	1,500,000		2,890,000
17	East 21st Station		951	35										
18			952	7,29, 30,35		62,000.00	30,762.65	30,762.65						
19						378,500.00	712,482.92	712,482.92						
20			952	33-36		16,000.00	7,000.00	7,000.00						
21			958	1	1,670,492.92	537,500.00	110,139.89	110,139.89						
22			971	1-4		44,000.00	17,176.00	17,176.00						
23			978	5,6		420,000.00	69,812.64	69,812.64						
24			979	1,27		266,000.00	1,412,878.31	1,412,878.31						
25			987	37		137,000.00	56,592.90	56,592.90						
26														
27					1,670,492.92	2,191,500.00	3,935,644.31	3,935,644.31						
28	West 42nd St. Station		1089	1							2,664,000	2,665,500		4,716,500
29			1127	7	1,639,000.00	1,922,000.00	1,122,582.48	1,122,582.48						
30			1090	23			146,370.92	146,370.92						
31						100,000.00	1,038.00	1,038.00						
32														
33					1,639,000.00	2,022,000.00	1,269,990.40	1,269,990.40						
34	West 44th St. Station		1092	7,28							1,660,000	1,660,000		3,290,000
35			1092	32,33,34	1,076,467.94	462,750.00	369,796.23	369,796.23						
36			1093	9		240,000.00	10,700.00	10,700.00						
37	Property taken by the City of New York, contest					342,000.00	462,819.35	462,819.35						
38	condemnation as yet to the Company, since the					*	1,172,892.61	1,172,892.61						
39	beginning of certain condemnation proceedings													
40					1,076,467.94	844,750.00	2,016,198.19	2,016,198.19						
41											60,500	216,000		1,018,500
42		Totals (to carry forward)			7,129,999.90	8,446,750.00	11,970,633.00	11,970,633.00			6,958,500	12,536,000		19,511,500

Valuations undisturbed on appeal

Reductions on proceedings otherwise

Reductions on proceedings otherwise

* Property condemned.

2. PROPERTY SCHEDULE—Comparative Summary (Concluded)

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent at close of year.

Line No.	LOCATION: Street and street number	Section or ward	Block number	Plot or lot number	CLASS OF PROPERTY: Land other than private rights of way — Book value	Land — Present value allowing depreciation (See Contra Schedule 2, page 7, Line 5)	Buildings — Reproduction cost new (See Contra Schedule 2, page 7, Line 6)	Buildings — Present value allowing depreciation (See Contra Schedule 2, page 7, Line 6)	Machinery or other apparatus — Reproduction cost new	Machinery or other apparatus — Present value allowing depreciation	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Land	Buildings / Contents	Apparatus	Total
1	Brought Forward				7,129,999.90	8,457,475.00	11,970,683.05	11,970,683.05			6,975.00	12,536.000		19,511.500
3	East 63d St. Station		1457	6	51,855.54	156,500.00	626,161.66	626,161.66						
4			1474	24		25,000.00	-	-			165.000	575.00		740.000
5					51,855.54	181,500.00	626,161.66	626,161.66						
6	East 65th Station		1157	1	226,142.17	1,050,000.00	816,222.48	816,222.48			950.000	700.000		1,650.000
8	East 99th Station		1670	1	631,309.07	464,000.00	1,080,702.24	1,080,702.24						
9			1692	1		249,000.00	17,519.11	17,519.11						
10														
11					631,309.07	713,000.00	1,098,221.35	1,098,221.35			782.500	666.500		1,449.000
12														
13	East 111th Station		1682	11.8		368,000.00	742,665.46	742,665.46						
14			1683	18		80,000.00	2,296.10	2,296.10						
15			1683	34.35	527,712.45	15,000.00	-	-						
16			1704	5		362,250.00	367,426.20	367,426.20						
17			1712	2		78,250.00	6,408.78	6,408.78						
18														
19					527,712.45	905,500.00	1,116,796.49	1,116,796.49			924.000	613.000		1,537.000
20														
21	East 132d St. Station		1998	6,13,14,15	110,444.87	61,500.00	131,971.77	131,971.77						
22			1999	1		186,500.00	370,192.71	370,192.71						
24														
25					110,444.87	248,000.00	502,164.48	502,164.48						
26	Lenox Station		2175	14,16,22 100,106	21,766.90	92,000.00	42,293.90	42,293.90			216.000	748.000		964.000
27											97.000	1.000		98.000
28	Yards, Elizabeth St.		239	1,6,7	101,086.01	161,500.00	156,576.36	156,576.36			144.500	75.500		220.000
29	19th St. Yard of 10th Ave		690	40	7,500.00	12,000.00	-	-			13.500	-		13.500
30	138/62 Yard, 18th St.		715	59	67,500.00	119,000.00	46,317.79	46,317.79			105.000	85.000 ✓		190.000
31	45th St. Terminal Power		870	42,60	517,658.98	421,000.00	2,620,680.52	2,620,680.52			431.000	2,405.000		2,836.000
32	212 East 57th St.		1028	38	401,422.25	280,000.00	296,340.64	296,340.64			520.000	180.000		700.000
33	222/8 East 66th St.		1156	45,46	57,926.11	53,000.00	76,488.87	76,488.87			43.000	62.000		105.000
34	66th St. Yard, East of 1st Ave		1177	21	116,542.76	421,000.00	90,524.20	90,524.20			320.000	35.000		355.000
35				Totals	10,063,723.11	12,407,225.00	19,419,421.36	19,419,421.36			11,686.000	18,680.500		30,366.500

Values and quantities not required to be reported

Reported in previous year

Included in Land

STATE TAX DEPARTMENT

Form S

2. PROPERTY SCHEDULE—Comparative Summary

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent at close of year.

Line No.	LOCATION: Street and street number	Section or ward	Block number	Plot or lot number	CLASS OF PROPERTY: Land other than private rights of way — Book value	Land — Present value (See Part II, page 37, Item 2)	Buildings — Reproduction cost new (See Pamphlet)	Buildings — Present value allowing depreciation (See Pamphlet)	Machinery or other apparatus — Reproduction cost new	Machinery or other apparatus — Present value allowing depreciation	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Land	Buildings (Contents)	Apparatus	Total
1					10.063.872.31	13.407.255.00	19.419.421.36	19.419.421.36			11686.000	18.680.500		30.366.500
2	East 60th St. N. River to Ave A		1455	13	61.901.96	125.000.00	6398.59	6398.59			115.000	2.000		117.000
3														
4	11th St. to 3rd Ave.		1682	33	65.342.33	46.500.00	91.195.39	91.195.39			46.000	49.000		95.000
5														
6	47th Street 150 ft.		2108	23	22.312.50	21.000.00	64.987.95	64.987.95			21.000	38.000		59.000
7														
8	166th St. to Audubon Ave		2123	48.51	55.726.00	50.000.00	619.80	619.80			44.000	500		44.500
9														
10														
11	Total Manhattan				10.288.654.00	13.649.755.00	19.582.623.09	19.582.623.09			11.914.000	18.768.000		30.682.000
12														
13	Bronx													
14	Twin Bridge Station	3236	1		269.531.57	250.000.00	925.843.10	925.643.10			200.000	902.000		1.102.000
15	East 132nd St. and Canal Ave	2583	360		99.436.75	65.000.00	7.450.00	7.450.00			100.000	5.000		105.000
16														
17	Total Bronx				368.968.32	315.000.00	933.293.10	933293.10			300.000	907.000		1.207.000
18														
19	Brooklyn													
20	Kent Ave	218 N	1		75.161.73	76.500.00	2.769.45	2769.45			50.200	19.800		70.000
21														
22														
23	Total all Boroughs				10.732.799.05	14.061.255.00	20.518.685.64	20.518.685.64						
24														
25	Assessments				302.952.21	-	-	-						
26														
27	Engineering Supervision				-	-	458.339.96	458.339.96						
28														
29	Interest during Construction				-	-	250.044.51	250.044.51						
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
41														
42	Totals (transcribed)				11.035.751.26	14.061.255.00	20.946.981.09	20.946.981.09			12.264.200	19.694.800		31.959.000

Values to be entered in accounts

Reported in preceding columns

Included in preceding columns

[fol. 4390] DEFENDANTS' EXHIBIT No. 58-A

63. Miscellaneous Matter

Hereunder may be shown any additional matters of fact relative to the matters comprehended by the various inquiries and schedules on the preceding pages which the respondent may desire to incorporate in this report. Give full information regarding any condition which in opinion of respondent affects the value of the special franchise and not specifically called for in the schedules contained in this report.

64. Paving Paid for by Respondent

Give below information required concerning paving actually paid for by respondent in installing property in streets, highways and public places. Fill in the kind of paving at the head of each column.

Prior to 1902

Year installed	Cost of each kind of paving laid during the year						Total cost of paving*
1902	$	$	$	$	$	$	$
1903							
1904							
1905							
1906							
1907							
1908							
1909							

*Estimated cost of paving paid for by the Company, displaced since in put.

64. Paving Paid for by Respondent—Continued

Year installed	Cost of each kind of paving laid during the year							Total cost of paving*
1910								
1911								
1912								
1913								
1914								
1915								
1916								
1917								
1918								
1919								
1920								
1921								
1922								
Total								$888,758.87

*Estimated cost of paving paid for by the Company, displaced since in put.

Property Schedule—December 31, 1922

East 11th St. Station—11th St.—13th St. Ave. D. & East River	$1,755,505.00	$3,537,126.65	$5,292,631.65
East 14th St. Station—14th St.—18th St. Ave. A. & East River	1,667,000.00	1,211,469.70	2,878,469.70
East 21st St. Station—19th St.—22nd St. 1st Ave. & Marginal St.	2,191,500.00	3,935,844.31	6,127,344.31
West 42nd St. Station—41st St.—43rd St. 11th Ave. & Hudson River	2,022,000.00	1,269,994.20	3,291,994.20
West 44th St. Station—44th St.—46th St. 11th Ave. & Hudson River	818,750.00	2,016,198.19	2,834,948.19
East 63rd St. Station 60th St.—63rd St. 1st Ave. & East River	181,500.00	626,161.66	807,661.66
West 65th St. Station—64th St.—66th St. Amsterdam & West End Avenues	1,057,000.00	816,222.43	1,873,222.43
East 99th St. Station—98th St.—99th St. 2nd Ave. & Marginal St.	713,000.00	1,098,221.35	1,811,221.35
East 111th St. Station—110th St.—112th St. 2nd Ave. & Harlem River	903,500.00	1,116,796.49	2,020,296.49
West 132nd St. Station—131st St.—131st St. Broadway and 12th Avenue	248,000.00	502,164.48	750,164.48
Inwood Station—Sherman Ave., Broadway & Dyckman St.	92,000.00	4,293.90	96,293.90

Property Schedule—December 31, 1922—Continued

Kingsbridge Station—Harlem River Terrace, Fordham Road & Sedgwick Ave.	250,000.00	925,843.10	1,175,843.10
Engineering and Superintendence	.....	453,339.96	453,339.96
Interest During Construction	.....	25,044.51	25,044.51
General Office—Irving Place and 15th St.	421,000.00	2,620,680.52	3,041,680.52
Office & Shop—Hester & Elizabeth Streets	151,500.00	154,575.78	306,075.78
Commercial Office—212 West 57th Street	580,000.00	296,340.84	876,340.84
Shop and Yard—65th-66th Sts. West of West End Ave.			
Commercial Office—114th St. and 3rd Avenue	421,000.00	90,524.20	511,524.20
Shop—474 West 159 Street	46,500.00	91,195.39	137,695.39
Site of Proposed Commercial Office—166th St. and Audubon Ave.	21,000.00	64,987.95	85,987.95
	50,000.00	619.80	50,619.80
19th St. West of 10th Avenue	12,000.00	.....	12,000.00
Garage—438/54 West 18th Street	119,000.00	46,317.79	165,317.79
Garage—222/8 West 65th Street	53,000.00	76,488.87	129,488.87
East 60th—61st Sts. West of Avenue A.	125,000.00	6,398.59	131,398.59
East 132nd St. Locust Ave. & East River	85,000.00	7,450.00	92,450.00
Coke Storage—626/32 Kent Avenue, Brooklyn	76,500.00	2,769.45	79,269.45
	14,061,255.00	20,946,981.09	35,008,236.09
Services outside of Streets, Highways & Public Places—Book Value		974,251.52	
Meters—Book Value		4,333,542.61	
Meter Conections—Book Value		435,960.32	

[fol. 4392]

79. Property Schedule Summary

Town Values and Village Values must be given separately. If Village is in more than one Town, show separately the Value of the property in that portion of the Village in each Town

Columns 1, 2, 3, 4, 5, 6 are not to include any Intangible Property, whether they be classed under real property, personal property tax or other statute laws

The information called for in this schedule must be furnished for each and every tax district together with contents of buildings

Tax District Name of city, town or incorporated village	*Tangible real property in streets, highways and public places, exclusive of paving not paid for by the company		Tangible real property outside of streets, highways and public places		Tangible personal property		7 Present value of all intangible property, excluding franchises	8 Last assessment of personal property	9 Last assessment of real estate outside of streets, highways, public places and public waters
	1 Cost to reproduce new See statement attached hereto	2 Present value	3 Cost to reproduce new See statement attached hereto	4 Present value	5 Cost to reproduce new See statement attached hereto	6 Present value			
City of New York—Borough of Manhattan	$13,228,942.67	$13,228,942.67	$35,008,236.09	$35,008,236.09	$11,820,526.65	$11,820,526.65	$173,804,718.31	$.....	Boro. of Manhattan 30,922,000
" " " Bronx	1,260,603.51	1,160,603.51							Boro. of Bronx 1,207,000
	14,489,546.18	14,489,546.18							Boro. of Brooklyn 70,000
									Mains, Pipes & Connections assessed as Real Estate of Corporations
									Boro. of Manhattan 12,140,500
									Boro. of Bronx 159,000
Total all tax districts.....	$	$	$	$	$	$	$	$	

The Company does not make a claim for a deduction from Operating Revenue of any "Receipts from operations of private right of way."

Property located outside New York State

Grand total

*The accompanying supplemental property reports in support of columns 1 and 2 of this summary, descriptive of property in streets, highways and public places in all tax districts, are an integral part of this report and are included in the verification by reference therein to this schedule.

Automobiles and Accessories—Book Value	218,006 73	
General Stable Equipment—Book Value	11,236 35	
Scows—Book Value	11,921 20	
Furniture and Fixtures—Book Value	561,468 83	
Tools and Implements—Book Value	193,887 74	
Gas Appliances Rented—Book Value	3,503,700 17	
	10,243,975 47	
Material and Supplies—Book Value	1,576,551 18	
		11,820,526 65
		$46,828,762 74

(Here follows side folio page 4392)

[fol. 4393] Consolidated Gas Company of New York, 130 East 15th Street

H. M. Brundage, Secretary

Reply in Affidavit Form to State Tax Commission's Letter of June 12, 1923

STATE OF NEW YORK,
County of New York, ss:

Henry M. Brundage, being duly sworn, says:

I am the Secretary of the Consolidated Gas Company of New York and am familiar with the report filed by that company with the State Tax Commission for the year ended December 31, 1922. I have read the communication addressed to the Company by the State Tax Commission, signed by Preston B. Wittmer, Deputy Tax Commissioner, under date of June 12th, 1923; and submit true and correct answers as follows, to the queries contained in such communication.

The amounts reported in Schedule 75 of our report as the reproduction value of the total tangible property outside of streets, highways and public places are the book values which have been judiciously established to be the actual cost to the Company of these assets. The sole exception is as to land, for which, pursuant to the decisions of the Courts, there was given a present value based upon an appraisal made of such land by Brown-Wheelock & Company during and as of the year 1921. Subsequently to December 31, 1908, our accounts have been kept in accordance with the Uniform System of Accounts prescribed by the Public Service Commission, effective as of that date, and under the continuous supervision of the Commission. The resultant form and itemization of our accounts does not enable us to furnish a detailed classification of buildings and contents at various locations, such as you desire under Schedule 75. The figures reported represent the best information in our possession as to the data called for in the schedules in question.

In reply to inquiry as to the amount of taxes, if any, included in Schedule 49, applicable to the cost of gas transferred by the Astoria Light, Heat & Power Company to this Company, the total cost of such gas transferred from the Astoria Light, Heat & Power Company was reported in Schedule 44, Line 31. The amounts reported in Schedule 49 represent only the taxes levied upon and paid by this Company.

In response to request as to the value of the tangible property of the former New York Mutual Gas Light Company included in the figure of $13,228,942.67, reported in Column 1 of Schedule 79, representing the tangible property [fol. 4394] in streets, highways and public places, the amount reported includes $2,806,455.94 of such property purchased from the New York Mutual Gas Light Company on August 31, 1922.

H. M. Brundage.

Subscribed and sworn to before me this 21st day of June, 1923.

Edgar S. Murray, Notary Public, Bronx County, No. 80.

Certificate filed in New York County No. 240.
Bronx County Register's No. 156.
New York County Register's No. 4248.
Commission expires March 30, 1924.

L.

[fol. 4395] Bureau of Special Franchises

Annual Report

June 29, 1923.

Consolidated Gas Company of New York, Mr. H. M. Brundage, Secretary, 130 East 15th Street, New York, N. Y.

Dear Sir: The State Tax Commission acknowledges receipt of your letter of June 21st in reply to the Commission's letter to you under date of June 12, 1923.

You are advised that the information given in your letter concerning schedule 75 of Form B report and schedules 2,

6, 7 and 8 of Form S report covering property owned by your company, cannot be considered by this department as a satisfactory compliance with the provisions of section 44 of the tax law.

Very truly yours, State Tax Commission, by ——
——, Deputy Commissioner.

JCB:B.

(Here follow Defendants' Exhibits Nos. 59, 59a, 60, and 61, marked side folio pages 4396, 4397, 4398, 4399, 4400, 4401, 4402, 4403, 4404, 4405, 4406, 4407, 4408, 4409, 4410, 4411, 4412, 4413, 4414, 4415, 4416, 4417, 4418, and 4419.)

DEFENDANTS' EXHIBIT NO. 59

TANGIBLE PROPERTY
OUTSIDE OF STREETS, HIGHWAYS AND PUBLIC PLACES

S. F. Form 5

REPORT

OF

Consolidated Gas Company of New York

FOR THE CITY of New York

TO THE

STATE TAX DEPARTMENT

OF THE

STATE OF NEW YORK

FOR THE

YEAR ENDED DECEMBER 31, 1923

THIS REPORT MUST BE MADE IN DUPLICATE AND FILED ON OR BEFORE MARCH 31, 1924

RECORDED

EXAMINED BY

ACKNOWLEDGED 4/1/24 G.L.O.

4396

STATE TAX DEPARTMENT

1. PROPERTY SCHEDULE—Summary of Assessed Values.

Form S

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Property Used During the Year in Connection with Operation of Special Franchise — Land	Land with improvements	Remarks (Respondent not to use this space)	Property Not Used During the Year in Connection with Operation of Special Franchise — Land	Land with improvements	Remarks (Respondent not to use this space)
1	Manhattan				$	$		$	$	
2	East 11th St		368	1	375000	2150000				
3			369	1	300000	1150000				
4				10	6000	6000				
5				11	1000	1000				
6				12	750	750				
7				13	4000	4000				
8				14	42500	50000				
9				15	48000	48000				
10			382	22	300000	1250000				
11					1086000	4666500				
12	East 13th St		969	1	169000	866000				
13	East 1st Ave		985	7	202500	202500				
14				19	7500	7500				
15				20	7500	7500				
16				39	7500	7500				
17				40	7500	7500				
18					252500	252500				
19	East 2nd St		951	35	53000	60000				
20			952	7	300000	980000				
21				29	11000	11000				
22				30	26000	50000				
23				33	8500	9500				
24				34	8500	10000				
25				35	34500	105500				
26			953	1	550000	1360000				
27			971	1	10500	16000				
28				2	7500	13000				
29				3	7500	13000				
30				4	7500	10000				
31				5	17000	100000				
32				6	423000	1155000				
33			979	1	877000	1890000				
34				27	7000	7000				
35			987	37	16500	187000				
36					2072000	5977000				
37	West 41st St		1092	1	500000	670000				
38				28	11500	11500				
39				38	8000	9000				
40				39	8000	9000				
41				39½	8000	9000				
42					$ 3265500	$ 7085500		$	$	

4397 3

1. PROPERTY SCHEDULE—Summary of Assessed Values (Concluded).

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923

Line No.	LOCATION				ASSESSED VALUES AS PER LAST ASSESSMENT MADE					
					Property Used During the Year in Connection with Operation of Special Franchise			Property Not Used During the Year in Connection with Operation of Special Franchise		
	Borough	Section or ward	Block number	Plot or lot number	Land	Land with improvements	Remarks Respondent not to use this space	Land	Land with improvements	Remarks Respondent not to use this space
1			Brought Forward		$ 335,500	$ 708,500		$	$	
2	West 44th St Station & Land		1094	9	315,000	780,000				
3					650,500	1488,500				
4	East 63rd St Station		1157	6	145,000	720,000				
5			1470	24	20,000	20,500				
6					165,000	740,500				
7	West 65th St Station		1156	45	10,000	21,000				
8				46	33,000	80,000				
9			1157	1	95,000	1765,000				
10					993,000	1867,000				
11	East 99th St Station		1670	1	142,500	1625,000				
12			1692	1	240,000	245,000				
13					782,500	1870,000				
14	East 111th St Station		1682	8	10,000	1,000				
15				11	412,500	1155,000				
16			1611	18	80,000	81,000				
17				36	7,000	7,000				
18				35	7,000	7,000				
19			1704	4	300,000	412,000				
20			1712	2	50,500	58,500				
21					924,000	1724,500				
22	West 132nd St Station		1998	16	15,000	19,000				
23				50	22,000	27,000				
24				53	7,000	7,000				
25				54	7,000	7,000				
26				55	7,000	7,000				
27				56	7,000	7,000				
28			1999	1	165,000	199,000				
29					230,000	282,000				
30	Inwood		2175	10	14,000	15,000				
31				18	24,000	27,000				
32				22	25,000	25,000				
33				100	29,000	29,000				
34				134	5,000	5,000				
35					97,000	98,000				
36	East 2nd Street Station		209	1	90,000	125,000				
37				5	55,000	105,000				
38					145,000	230,000				
39	Various Plots in 8		870	47	21,000	36,000				
40				60	41,000	290,000				
41					431,000	2986,000				
42		Grand		Totals	$ 7,975,500	$ 23681,500		$	$	

4398

STATE TAX DEPARTMENT

1. PROPERTY SCHEDULE—Summary of Assessed Values.

Form S

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Property Used During the Year in Connection with Operation of Special Franchise — Land	Land with improvements	Remarks (Respondent not to use this space)	Property Not Used During the Year in Connection with Operation of Special Franchise — Land	Land with improvements	Remarks (Respondent not to use this space)
1	Borough Manhattan				$ 797,500	$ 2368,500		$	$	
2	Hud 18 St Ind		691	11				250,000	252,000	
3			715	59				105,000	190,000	
4								355,000	442,000	
5	Hud 42 St Bus		1090	43	100,000	100,000				
6										
7	212 Hud 57 St		1028	38	530,000	710,000				
8										
9	66 St Hud End Ont		1177	21	320,000	355,000				
10										
11	114 St, 3 Ont		1642	33	62,000	120,000				
12										
13	474 Hud 157 St		2108	28	21,000	57,000				
14										
15	166 St Amsterdam Ave		2173	48	1550	1550				
16				49	10,000	10,500				
17				50	10,000	10,000				
18				51	10,000	10,000				
19					45,500	46,000				
20	Total Manhattan				904,000	2507,500		355,000	442,000	
21										
22										
23	Bronx									
24	Commercial Ont		2497	132	70,000	70,000				
25										
26	Kingsbridge Station		3256	1	200,000	1123,500				
27										
28	Harlem Riv Station		2770		100,000	100,000				
29			2772		3,100	3,100				
30			2775		51,050	53,550				
31			2776		52,120	52,120				
32			2777		12,550	14,750				
33			2778		117,650	117,650				
34			2780		42,600	42,600				
35			2781		774,900	774,900				
36					1632,970	1587,670				
37	Total Bronx				1802,970	2711,170				
38	Brooklyn									
39	Tank Ont		2184	1	60,200	70,000				
40										
41										
42	Total All Boroughs				$ 1897,170	$ 3781,670		$ 355,000	$ 442,000	

2. PROPERTY SCHEDULE—Comparative Summary (Concluded)

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Street and street number	Section or ward	Block number	Plot or lot number	CLASS OF PROPERTY: Land (other than Private Rights of Way): Book value	Land: Present value	Buildings: Reproduction cost new	Buildings: Present value allowing depreciation	Machinery and Other Apparatus: Reproduction cost new	Machinery and Other Apparatus: Present value allowing depreciation	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Land	Buildings	Apparatus	Total
1	Brought Forward				$ 7[illegible]08	$ 6,759,500.00	$ 20,871,695	$ 12,708,716.67	$	$	$ 15,773,000	$ 11,500,000	$	$ 27,273,000
2	East 111th St Station		1682	8 11		368,000.00	743,265.13	743,265.13						
3			1683	18		63,000.00	2,394.98	2,394.93						
4			1683	34 35	627,712.45	12,000.00								
5			1700	5		362,500.00	365,490.04	365,490.04						
6			1712	2		78,250.00	40,878	40,878						
7					627,712.45	400,750.00	1,111,750.05	1,111,750.05						
8											926,000	800,500		1,726,500
9	West 132nd Station		1995	16		20,000.00	7,207.72	7,207.72						
10			1998	50 51 56	130,449.87	103,500.00	134,946.35	134,946.35						
11			1999	1		227,000.00	329,192.71	329,192.71						
12					130,449.87	350,500.00	511,346.78	511,346.78						
13											230,000	712,000		942,000
14	East 74th 3rd Ave 2d		985	7, 19, 20		168,000.00	231,500.00	218,111.35						
15											232,500	-		232,500
16	Ave A & Elizabeth St		239	1, 5	102,462.00	170,000.00	165,790.42	155,790.42						
17											145,000	85,000		230,000
18	436 E 52nd 1st Ave		715	59	6,750.00	125,000.00	46,317.74	46,317.74						
19											105,000	85,000		190,000
20	Lexington Ave 125th St		870	47, 50	52,628.78	500,000.00	2,622,291.35	2,622,291.35						
21											451,000	2,585,000		2,936,000
22	212 E 42nd St 1st Ave		1028	38	201,262.25	660,000.00	296,940.62	296,940.62						
23											650,000	18,000		7,000,000
24	223 E 42nd St 2nd Ave		1150	47, 46	87,722.11	555,000.00	76,481.87	76,481.87						
25											43,000	62,000		105,000
26	66th St & East End Ave		1177	21	114,422.76	440,000.00	91,309.68	91,309.68						
27											320,000	35,000		355,000
28	114th St & 8th Ave		1642	33	65,342.28	46,000.00	91,499.39	91,499.39						
29											52,000	68,000		120,000
30	47th St & 10th Ave		2108	23	223,250.50	21,000.00	66,207.46	66,207.46						
31											21,000	38,000		59,000
32	166th St & Anderson Ave		2123	46, 51	58,725.00	50,000.00	61,980	61,980						
33											45,500	500		46,000
34	Linwood		2175	15, 17, 22, 100, 120	21,766.90	92,000.00	42,999.90	42,999.90						
35											97,000	-		98,000
36	Total Manhattan				7,978,159.17	10,450,250.00	20,009,289.88	20,009,289.88						
37											9,149,000	16,112,500		25,261,500
38	Bronx													
39	153rd St & Cromwell Ave		2497	132	201,078.00	200,000.00	-	-			70,000	-		70,000
40														
41														
42				Totals	$ 7[illegible]100	$ 200,000.00	$ -	$ -	$	$	$ 74[illegible]	$ -	$	$ 70,000

Washington Heights not included in summary

Yorkville not included in summary

Included in preceding column

6

4400

STATE TAX DEPARTMENT

2. PROPERTY SCHEDULE—Comparative Summary

Tangible real property outside of streets, highways, public places and public waters other than private rights of way and property located thereon.

Company Consolidated Gas Company of New York

City New York

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1919.

Line No.	LOCATION: Street and street number	Section or ward	Block number	Plat or tax number	CLAIM OF PROPERTY: Land owned free of private rights or way — Book value	Land owned free of private rights or way — Present value	Structures — Reproduction cost new less depreciation	Structures — Present value allowing depreciation	Machinery or other apparatus — Reproduction cost new	Machinery or other apparatus — Present value allowing depreciation	ASSESSED VALUES AS PER LAST ASSESSMENT MADE: Land	Buildings	Appraisal	Total
1	Borough of Brooklyn				$ 70,078.00	$ 200,000.00	$	$	$	$	$ 70,000	$	$	$ 70,000
2	Hunterspoint Station		2234	1	262,131.57	250,000.00	920,968.01	72,674.01			200,000	903,500		1,103,500
3														
4	Newtown Point Station		2270 & 2271	1 & 77	224,103.00	250,000.00	86,902.02	86,902.02			165,277	47,000		1,537,670
5														
6	Total Borough				2,787,212.57	2,500,000.00	962,870.03	962,870.03			1,865,277	950,500		2,711,170
7														
8	Borough of Queens													
9	Power Plant		2.1a	1	76,678	60,000.00	276,904	276,904			50,000	19,500		70,000
10														
11	Total City Borough				10,860,394.57	13,513,825.00	20,977,510.96	20,977,510.96			1,100,270	1,704,050		28,042,670
12														
13	Organization				295,090.18	-	-							
14														
15	Engineering Expenses				-	-	52,190.15	52,190.15						
16														
17	Bonds Discounted on bonds for Purchase				-	-	31,611.90	31,611.90						
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														
31														
32														
33														
34														
35														
36														
37														
38														
39														
40														
41														
42	Total (Land owned free)				$ 11,155,473.75	$ 13,513,825.00	$ 21,286,672.59	$ 21,286,672.59	$	$	$ 1,100,270	$ 1,704,050	$	$ 28,042,670

Value here as included in assessment of Real Estate

Not included in assessment of Real Estate

Included in assessment of Real Estate

STATE TAX DEPARTMENT

4. PROPERTY SCHEDULE—Land

Form 9

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

LAND OTHER THAN PRIVATE RIGHTS OF WAY.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1913.

Line No.	LOCATION: Borough	Section of Island	Block number	Plot or lot number	DESCRIPTION OF LAND: Purpose for which used	Approximate dimensions	LAND USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE: Area square feet	Book value	Present value	LAND NOT USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE: Area square feet	Book value	Present value	This column not to be used by respondent
1	Manhattan												
2	East 11th St Station		368	1		62'x26.6	162 708		46500000				
3			369	1	Water Gas House	198'x138½'	106 623						
4				10		52'							
5				11		113½'							
6				12	River Bulkhead	25'		17 5 12 500	67100000				
7				13		239'							
8				14		Plot							
9				15		160'6"							
10			382	23	Water Gas House	443'x82.6½	91 479		35700000				
11							360 808	17 5 12 500	149300000				
12	East 10th St Station		989	1	Gas Storage Station	261'x206½'	53 893	1 98 8 8 [illegible]	7100000				
13	East 2nd St Station		951	35		176'x92'	16 192		6500000				
14			952	7		423'x189'	80 060						
15				29		20'x70'	1400						
16				30		60'x70'	4200		296000 00				
17				31		61'x94'	6 110						
18				33	Water Gas	96'x20'	1 920						
19				34		96'x19'	1 786		160000				
20			953	1		6.5'x197½	12 067		580000 00				
21			978	1		70'x23'	1610	1 6 7 9 7 7 7 13					
22				2	Wharf	70'x23'	1610						
23				3		70'x23'	1610		460000				
24				4		70'x23'	1610						
25				5		70'x92'	6440						
26				6		96'x66'	14966		69000000				
27			979	1									
28				27		6 [illegible] 97.6	133 80 1		5965000				
29			982	57	Storage	166'x238'	29 [illegible]		1300000				
30							26 492	1 [illegible] 22 18	2 [illegible] 6 [illegible]				
31	Hyde 42d St Station		1090	23		150'x100½	15 000	6 000000	1260000				
32	Hunt 44th St Station												
33			1092	16	Gas Storage	27'x82.6 [illegible]	2 [illegible] 963						
34				28		100½'x22'	2 [illegible] 3		312000				
35				45		100½'x 6 [illegible]	1 683						
36				46½	Station	100½'x 6 [illegible]	1 683	1 0 3 9 7 3 1 8 5	2 [illegible]				
37				39		100½'x 6 [illegible]	1 683						
38			1092	9		27½'x 82.6 [illegible]	2 [illegible] 198		8 [illegible]				
39							118 703	1 [illegible] 3 [illegible]	587000 00				
40													
41													
42					Totals for every borough		1 0 6 6 [illegible]	$ 269 [illegible]	$ [illegible]		$	$	

4402 11

STATE TAX DEPARTMENT

6. PROPERTY SCHEDULE—Land

Form 5

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

LAND OTHER THAN PRIVATE RIGHTS OF WAY.

Give below the particulars called for concerning the above described property owned by the respondent as of December 31, 1913.

Line No.	LOCATION: Borough	Section or Ward	Block Number	Plot or Lot Number	DESCRIPTION OF LAND: Purpose for which used	Approximate Dimensions	LAND USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE: Acres	Book value	Present value	LAND NOT USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE: Acres	Book value	Present value	This column not to be used by respondent
1	Manhattan								$		$	$	
2	East 74th St Station		868	1		62.1' x 263'	162,702		450,000.00				
3			347	1	Water Gas House	198' x 138.6'	106,623						
4				10		52'							
5				11		113.6'							
6				12	Power House	25'		1,755,726.00	67,000.00				
7				13		229'							
8				14		Prof							
9				15		166.6'							
10			882	23	Water Gas House	100' x 206.6'	91,479		475,000.00				
11							840,804	1,755,726.00	1,492,000.00				
12	East 74th St Station		969	1	Gas Storage Station	261' x 206.6'	53,893	1,650,000.00	2,000,000.00				
13	East 2nd St Station		961	31		176.8' x 92'	16,192		650,000.00				
14			952	1		422' x 182'	80,000						
15				29		20' x 70'	1,400						
16				30		60' x 70'	4,200		896,000.00				
17				31		60' x 96'	6,110						
18				33	Water Gas	96' x 22'	1,492						
19				34		94' x 19'	1,786		150,000.00				
20			953	1		638' x 197.6'	121,067		502,000.00				
21			978	1		70' x 23'	1,610	1,670,777.00					
22				2	Prof	70' x 23'	1,610						
23				3		70' x 23'	1,610		448,000.00				
24				4		70' x 23'	1,610						
25				5		70' x 92'	6,440						
26				6		296' x 82'	149,466		149,000.00				
27			979	1									
28				27		462' x 197.6'	183,80		574,000.00				
29			962	32	Storage	182' x 228'	29,736		1,100,000.00				
30							1,840,922	1,670,777.00	8,241,000.00				
31	East 138th St Station		1090	28		400' x 100'	40,000	600,000.00	450,000.00				
32	East 74th St Station		1092	16	Storage Lot	1,250,000.00	241,940						
33				25	Gas Storage	100' x 82'	2,418		312,000.00				
34				26		100' x 100'	1,683						
35				28	Station	100' x 100'	1,683	1,038,731.80					
36				29		100' x 100'	1,683						
37			1094	9		829' x 282' x 10'	54,156		250,000.00				
38							1,184,701	1,038,731.80	562,000.00				
39													
40													
41					Totals for year (acres)		3,025,623	$ 3,709,508.80	$ 8,803,000.00		$	$	

6. PROPERTY SCHEDULE — Land (Concluded)

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

LAND OTHER THAN PRIVATE RIGHTS OF WAY.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION				DESCRIPTION OF LAND		LAND USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE			LAND NOT USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE			This column not to be used by respondent
	Borough	Section of ward	Block number	Plot or lot number	Purpose for which used	Approximate lot dimensions	Area, square feet	Book value	Present value (As stated on bold page 4)	Area, square feet	Book value	Present value	
1					Brought Forward		1046488	$ 4691 59982	$ 4793 50000		$	$	
2	East 63rd St Station		1157	6	Gas Storage	20.1/2 x 20	48505	51 35558	179 00000				
3			1674	20	Station	116.1/2 x 45	5183	22 00000	36 00000				
4							53688	73 35558	215 00000				
5	East 65th St Station		1157	1	Gas Storage Station	800 x 200.10"	160667	322 08425	1067 00000				
6	East 79th St Station		1670	1	Holder Gas	650 x 201.10"	131142		464 00000				
7			1692	1	Works	320 x 201.10"	64668	63 30437	260 00000				
8							195810	63 30437	724 00000				
9	East 111th St Station		1662	8									
10				11	Gas	475 x 202	95871		368 00000				
11			1683	18		88.1/2 x 225	20206		83 00000				
12				34	Storage	25 x 101	2424	527 71200					
13				35		25 x 101	2525		15 00000				
14			1706	5	Station	506 x 201.10"	102128		362 50000				
15			1712	2		201.10" x 45	7082		782 50000				
16							232337	527 71200	906 75000				
17	East 132nd St Station		1996	16		200 x 25	5000		200 00000				
18				60		75 x 100	7500						
19				23	Gas Storage	25 x 100	2500						
20				54		25 x 100	2500	130 44987	103 50000				
21				55	Station	25 x 100	2500						
22				56		25 x 100	2500						
23			1977			240 x 198.10"	49456		227 50000				
24							72456	130 44987	330 50000				
25	East 17th St and Ave C		481	70		300 x 184	55200						
26				19	Street Light	72 x 25	2300						
27				20		72 x 25	2300	16 00000	23 00000				
28				39	Storage	72 x 25	2300						
29				40		72 x 25	2300						
30							64400	16 00000	23 00000				
31	Hunters Point Ave		239	1	Communal Plot	100 x 100	10000						
32				5	Street Dept Offices	104.10" x 75'	7886	102 00000	175 00000				
33							17886	102 00000	175 00000				
34													
35	45th Ave & Vernon Blvd		715	59	Storage	225 x 92				2700	67 50000	125 00000	
36	Jamaica Ave & 150th St		870	47	Gravel	64 x 24.1/2	1890						
37				60	Office	64 x 29.1/2	2430	50 75000	50 00000				
38				61			2430	50 75000	50 00000				
39	212 West 59th St		1028	38	Commercial Office	45 x 120	12106	40 44224	60 00000				
40													
41													
42						Totals	1943184	$ 7550 44167	$ 7623 25000	2700	$ 67 50000	$ 125 00000	

STATE TAX DEPARTMENT

6. PROPERTY SCHEDULE—Land

Form S

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

LAND OTHER THAN PRIVATE RIGHTS OF WAY.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF LAND: Purpose for which used	Approximate lot dimensions	LAND USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE: Area, square feet	Book value	Present value (See Statement Worked to Page 38)	LAND NOT USED DURING THE YEAR IN CONNECTION WITH OPERATION OF SPECIAL FRANCHISE: Area square feet	Book value	Present value	This column not to be used by respondent
1							1903135	7566263 67	9623250 00	20700	67500 00	125000 00	
2	222/8 West 65th St		1156	45		25x100x2	2512						
3				46	Garages	74x100x2	7438	57926 11	93000 00				
4							10050	57926 11	93000 00				
5	66th St. West End Ave		1177	21	Shop & Distr Offices	32'9"x20'0"	6618	116 5276	140000 00				
6	114th St & 3rd Ave		1682	33	Commercial Offices	75'2"x111'	7611	65 3423	46500 00				
7	474 West 152nd St		2028	23	Shop Office	50x100	5000	22 3125	21000 00				
8	166th St & Audubon Ave		2123	48		25x95	2375						
9				49		25x95	2375						
10				50	Site for proposed	25x95	2375	55725 00	50000 00				
11				51	Commercial Office	25x95	2375						
12							9500	55725 00	50000 00				
13	Inwood		2175	15	(Irregular)	120x44							
14				15	Storage "	110x100							
15				22	"	180x74							
16				100	Proposed "	128x935	4500	217690	92000 00				
17				124		100x90							
18							4500	217690	92000 00				
19													
20	Total Manhattan						2046916	7905659 17	10328250 00	20700	67500 00	125000 00	
21	Bronx												
22	153rd St & Cromwell Ave		2497	132	City for Garage Repair Shop	Irregular	159625	20107500	20000000				
23	Kingsbridge Station		3236	1	Gas Storage Station complete	320x500	160846	2695357	25000000				
24	Fourth Court Station		2770										
25			2772		Site for								
26			2775			Irregular							
27			2776		Manufacturing								
28			2777			179.6 acres	7827294	226510800	235000000				
29			2778		Station								
30			2780										
31			2781										
32							7827294	226510800	235000000				
33	Total Bronx						8467785	273567457	285000000				
34	Iron Pier												
35	624/32 East 22nd St		2116	1	Coke Storage	123'7"x155'	19077	754613	600000				
36													
37	Assessments for unpurchased lands							2750 9018					
38													
39													
40	Total All Boroughs						10515776	10991 62365	13188250 00	20700	67500 00	125000 00	
41													
42					Totals (to carry forward)								

4405

STATE TAX DEPARTMENT

7. PROPERTY SCHEDULE—Buildings and Other Structures.

Form 6

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

BUILDINGS AND OTHER STRUCTURES. Contents

NOTE: Do not include buildings and other structures located on private rights of way in this schedule.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1924.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF BUILDING OR OTHER STRUCTURE: Type of construction and purpose for which used		Ground area, sq. ft.	No. of stories or height	Gross contents or capacity cu. ft.	Cost of reproduction new	Age	Book value as reduced to present value, allowing depreciation	Proportion used during year in connection with operation of special franchise	This column not to be used by respondent
1	Manhattan												%	
2	East 11th St Station		368	1	East 11th Street Water Gas Plant					1797620 85		1797620 85		
3			369	1045	consisting of					541965 65		541965 65		
4			382	22	3 Gas Holders	Steel				941641 97		941641 97		
5					1 Relief Holder	"				3584228 47		3584228 47	100	
6					6 Governor Valve Houses	Brick								
7					1 Oil Storage House	"								
8					2 Shops	"								
9					1 Engine Exhaust Steam House	"								
10					2 Generator Houses	"								
11					1 Condenser House	"								
12					1 Scrubber	"								
13					2 Purifier Houses	"								
14					2 Engine "	"								
15					1 Boiler "	"								
16					3 " Stacks	"								
17					1 Blacksmith Shop	"								
18					1 Gasholder	Steel								
19					1 Tar Tanks	"								
20					2 Station Meters	"								
21					2 Purifying Apparatus Houses	Brick								
22					1 Storage Building	"								
23														
24	East 15th St Station		984		East 15th St Steel Storage Station					655783 09		655783 09	100	
25					consisting of									
26					1 Gas Holder	Steel								
27					1 Gypsum Station Apparatus	Brick								
28					1 Boiler House	"								
29					1 Boiler Stack	Steel								
30														
31	East 21st St Station		951	25	East 21st Street Station Gas Plant					30762 65		30762 65		
32			952	7293.50	Consisting of					983229 53		983229 53		
33			952	33.50	1 Office & Storage House	Brick				70000		70000		
34			958		6 Gas Holders	Steel				813018 25		813018 25		
35			975	1052	1 Station	Brick				17174 00		17174 00		
36			978	506	6 Generators	"				1069652 53		1069652 53		
37			979	1.27	3 Condensers Housed	"				184534 83		184534 83		
38			96-	27	3 Tyler "	"				61707 54		61707 54		
39		Queens	Long Island City		2 Gasholders	"				102767 50		102767 50		
40		"	"		1 Compressor House	"				491703 88		491703 88	100	
41														
42							Totals (to carry forward)			9221715 44		9221715 44		

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7. PROPERTY SCHEDULE — Buildings and Other Structures (Concluded).

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

BUILDINGS AND OTHER STRUCTURES. Contents

NOTE: Do not include buildings and other structures located on private rights of way in this schedule.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF BUILDING OR OTHER STRUCTURE: Type of construction and purpose for which used		Ground area, sq. ft.	No. of stories or height	Gross contents or capacity cu. ft.	See preceding schedule Reproduction cost new	Age	See preceding schedule Present value, allowing depreciation	Proportion used during year in connection with operation of special franchise	This column not to be used by respondent
1									Brought Forward	$ 9221715		$ 9221715	%	
2	East 74 St Station	Contd			5 Grip Tanks	Steel								
3					1 Condenser House	Brick								
4					4 Storage Houses	"								
5					23 Oil Tanks	Steel								
6					1 Generator House	Brick								
7					1 Meter "	"								
8					4 Coal Houses	"								
9					2 Pump "	"								
10					1 Hoyt Hospital	"								
11					3 Shops	"								
12					3 Paint Shops	"								
13					1 Rigger Loft	"								
14					1 Sawdust House	"								
15					1 Boiler "	Steel								
16					1 Wash Locker House	Brick								
17					1 Tank House	"								
18					4 Tar Tanks	Steel								
19					3 Tar Separators	"								
20														
21	West 42 St Station		1090	23	West 42 St Plant consisting of					103600		103600		
22					1 Weigh Office	Brick		1 Story						
23					Unamortized amount not allocated					11939820		11939820		
24										11943420		11943420	100	
25	West 44 St Station		1092	16, 28	West 44 St Gas Storage Station					3698263		3698263		
26			1092	23 & 29	consisting of					1070000		1070000		
27			1093	9	5 Gas Holders	Steel				4628093		4628093		
28		Report taken by city of N.Y.			1 Valve House	Brick				1172926		1172926		
29					1 Boiler "	"				2016229		2016229	100	
30					2 Storage Houses	"								
31					1 Storage House	Steel								
32					3 Dwellings	Brick								
33														
34	East 63 St Station		1407	6	East 63 St Gas Storage Station					516931		516931		
35			1414	24	consisting of									
36					1 Gas Holder	Steel		3 Stories		516931		516931	100	
37														
38														
39														
40														
41														
42								Totals		$ 129498198		$ 129498198		

The Company records do not contain this information

1 to 3 Stories

The Company records do not contain this information as to the majority of the buildings

STATE TAX DEPARTMENT

7. PROPERTY SCHEDULE — Buildings and Other Structures.

Form 8

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York
City New York

BUILDINGS AND OTHER STRUCTURES. Contents

NOTE: Do not include buildings and other structures located on private rights of way in this schedule.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF BUILDING OR OTHER STRUCTURE: Type of construction and purpose for which used	Ground area, sq. ft.	No. of stories or height	Gross contents or capacity cu. ft.	See footnote attached. Reproduction cost new	Age	See footnote attached. Present value, allowing depreciation	Proportion used during year in connection with operation of special franchise	This column not to be used by respondent
1									$ 949 8 198 84		$ 949 8 198 84	%	
2	West 65th St Station		1157	1	West 65th St Gas Storage Station				522 846 87		522 846 87	100	
3					Consisting of								
4					2 Tar Holders	Steel	140 ft	Stories					
5					1 Engine House	Brick							
6					1 Boiler "								
7													
8	East 74th St Station		1670	1	East 74th St Water Gas Plant				1118 591 05		1118 591 05		
9			1692	1	Consisting of				17 519 11		17 519 11		
10					3 Gas Holders	Steel			1136 072 16		1136 072 16	100	
11					1 Dwelling	Brick							
12					1 Office "	"							
13					1 Locker House	"							
14					1 Meter "	"							
15					1 Purifier "	"							
16					1 Generator "	"							
17					1 Condenser "	"							
18					1 Tank "	"							
19					1 Exhauster "	"							
20					1 Coal "	"							
21					2 Tar Separators	Frame	1402	Stories					
22					14 Oil Tanks	Steel							
23					2 Condensers	"							
24					1 Pump House								
25					1 Machine Shop	Brick							
26					1 Engine House								
27					1 Shed "								
28					1 Coal Locker "								
29					2 Scrubbers	Steel							
30					1 Tar Tank	"							
31					1 Recorder	Masonry							
32													
33	East 111th St Station		1682	6, 11	East 111th St. Gas Storage Station				743 265 10		943 265 10		
34			1683	18					2 395 93		2 395 93		
35			1683	34, 35	Consisting of								
36			1702	5	2 Gas Holders	Steel			368 149 69		368 149 69		
37			1712	2	1 Valve House	Brick			11 468 73		11 468 73		
38					1 Boiler	Steel	1 Story						
39					2 Wagon Sheds	Frame			1118 560 45		1118 560 45	100	
40					1 Gelda House	Brick							
41					1 Emergency Auto House	"							
42													
43						Totals (to carry forward)			$ 6027 277 32		$ 6027 277 32		

The foregoing records do not contain this information.

The foregoing records do not contain this information, except as to the property of the company specified.

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7. PROPERTY SCHEDULE — Buildings and Other Structures (Concluded).

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York
City New York

BUILDINGS AND OTHER STRUCTURES. Contents

NOTE: Do not include buildings and other structures located on private rights of way in this schedule.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF BUILDING OR OTHER STRUCTURE: Type of construction and purpose for which used		Ground area, sq. ft.	No. of stories or height	Gross contents or capacity cu. ft.	Reproduction cost new	Age	Present value, allowing depreciation	Proportion used during year in connection with operation of special franchise	This column not to be used by respondent
									Brought Forward	See preceding page		See preceding page	%	
1	East 11 St between 1st & Ave A				1 Garage & Stable	Brick		1 Story		$ 16,027,277.32		$ 16,027,277.02		
2					1 Garage	"								
3					1 "	Steel								
4					1 Stone House	Brick								
5					1 Blacksmith Shop	"								
6					1 Coke Conveyor	Frame								
7					1 Office	"								
8					1 Coal Pocket	Brick								
9														
10														
11	West 132 St & Harlem River		1995	1	West 132 St. Gas Storage Station					72,772		72,772		
12			1998	50, 53, 54	consisting of					13,403,635		13,403,635		
13			1999	1	1 Gas Holder	Steel				370,199.71		370,199.71		
14					1 Exhauster House	Brick		1 Story		51,178.78		51,178.78	100	
15					1 Boiler "	"								
16					1 Emergency Wagon House	"								
17					1 Coal Pocket	Frame								
18	East 74 St between 1st & 2d Ave		981	7, 19, 20, 44, 140	East 74 St. Storage Yard					21,811.35		21,811.35	100	
19					consisting of									
20					1 Blacksmith Shop	Brick		1 Story						
21					3 Storage Sheds	Frame								
22					2 " "	Steel								
23														
24	Harlem River Yard		239	1, 5	Commercial Shop & Dept. Offices					155,890.42		155,890.42	100	
25					consisting of									
26					1 Office	Brick		2 Story						
27					1 " - Fish Shop	"		1 Story						
28					1 Shop	"								
29					1 Garage	Steel								
30														
31	439 to 441 West 18 St		715	59	1 Garage	Brick		3 Stories		463,779		463,779	- 0 -	
32														
33	Irving Pl & 15 St		870	47, 60	1 General Office Building			21, 18 Stories		2,622,291.35		2,622,291.35	100	
34					Fireproof Steel Frame									
35														
36	212 West 57 St		1028	38	Commercial Offices Fireproof Steel Frame			3 Stories		296,340.66		296,340.66	100	
37														
38	222 1/2 West 61 St		1156	46, 46	Garages, Repair Shop	Brick		3 Stories		76,188.17		76,188.17	100	
39														
40														
41									Total	$ 49,768,206.72		$ 19,761,206.72		

STATE TAX DEPARTMENT

7. PROPERTY SCHEDULE—Buildings and Other Structures.

Form 9

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York

BUILDINGS AND OTHER STRUCTURES. Contents

NOTE: Do not include buildings and other structures located on private rights of way in this schedule.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF BUILDING OR OTHER STRUCTURE: Type of construction and purpose for which used	Ground area, sq. ft.	No. of stories or height	Gross contents or capacity cu. ft.	See instructions for Reproduction cost new — Year 1923	Age	See instructions for Present value, allowing depreciation — Year 1923	Proportion used during year in connection with operation of special franchise	This column not to be used by respondent
1													
2	66th St. Hud. Riv.		1177	21	Shop & Stock Dept. Offices consisting of		1 to 3 Stories		$19788204.72		$19788204.72	%	
3					1 Office	Brick			9130963		9130963	100	
4					1 Meter & Appliance Shop	"							
5					1 Engineering Auto House	"							
6					3 Storehouses	Steel Frame							
7					5 "								
8					1 Blacksmith Shop	Steel							
9					1 Platforms	Wood							
10													
11	11th Ave.		1642	33	Commercial Offices consisting of		3 Stories		9119539		9119539	100	
12					2 Brick Buildings								
13													
14	27th St.		1111	23	Pipe Shop 1 Brick Building		1 Stories		6420744		6420744	100	
15													
16	166th St. Hud. Riv.		2123	41.51	Proposed site of Commercial Office		4 Stories		61980		61980	100	
17													
18	Kenwood		2175	5.1 to 100.1	Storage purposes 1 Brick Structure		1 Story		429390		429390	100	
19													
20													
21	Total Manhattan												
22									20009830.28		20009830.28		
23													
24	Bronx												
25	Kingsbridge Station		3236		1 Kingsbridge Gas Storage Station				92.961.00		92.961.00	100	
26					consisting of								
27					1 Gas Holder	Steel	1 to 2 Stories						
28					1 Governor House	Brick							
29													
30	Lund Court Station		2770 to 2780	7-11-17	1 Gas Manufacturing Station				367402		367402	100	
31					2 Offices	Frame	1 Story						
32					Storage Building	Brick							
33													
34													
35	Total Bronx								962914.3		962914.3		
36													
37													
38													

7. PROPERTY SCHEDULE – Buildings and Other Structures (Concluded).

Tangible real property outside of streets, highways, public places and public waters.

Company Consolidated Gas Company of New York

City New York BUILDINGS AND OTHER STRUCTURES + Contents

NOTE: Do not include buildings and other structures located on private rights of way in this schedule.

Give below the particulars called for concerning the above classified property owned by the respondent as of December 31, 1923.

Line No.	LOCATION: Borough	Section or ward	Block number	Plot or lot number	DESCRIPTION OF BUILDING OR OTHER STRUCTURE: Type of construction and purpose for which used	Ground area, sq. ft.	No. of stories or height	Gross contents or capacity cu. ft.	Book cost at end of year as defined by the Commission: Reproduction cost new	Age	Book cost at end of year as defined by the Commission: Present value, allowing depreciation	Proportion used during year in connection with operation of special franchise	This column not to be used by respondent
								Brought Forward	209729469 1		209729469 1	%	
2	Brooklyn												
3	East Sta		2186	1	Coke Storage consisting of				276945		276945	100	
4					20 Silos - 1 Brick & Frame								
5					1 Storage "								
6					1 Coke Shed "			1 Story					
7					1 Platform "								
8													
9													
10	Engineering & Superintendence								521590 15		521590 15		
11													
12	Cash Discount on Construction purposes								316539 4		316539 4		
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													
35													
36													
37													
38													
39													
40													
41													
42								Totals	2146458 57		2146458 57		

The Company's records do not contain this information

The Company's records do not contain this information with sufficient accuracy to justify its publication

This form of report, Schedule S, consists of 20 pages, all of which must be securely bound within this cover and returned to the State Tax Department on or before March 31, 1924.

The law requires that every report made pursuant to Section 44 shall have annexed thereto the affidavit of the President, Vice-President, Secretary or Treasurer of the association or corporation, or one of the persons or one of the members of the copartnership making the same.

STATE OF NEW YORK }
County of New York } ss:

The undersigned H M Brundage, being duly sworn, says that he is Secretary, of Consolidated Gas Company of N.Y., that the foregoing report, consisting of 20 pages and 9 schedules of the tangible property outside of streets, hig' ways and public places and the value thereof of said company for the year ended December 31, 1923, is true to the best of his knowledge and belief.

.....(L. S.)
H M Brundage

Subscribed and sworn to before me, this
31st day of March, 1924
Thomas W Smith .....Notary Public.
NOTARY PUBLIC
~~New York County No. 571~~ .....County, N. Y.
New York Co. Register's No. 5174
Term Expires March 30, 1925

FINANCIAL 7-19-23-500 (20-4"S)

DEFENDANTS' EXHIBIT NO. 59A

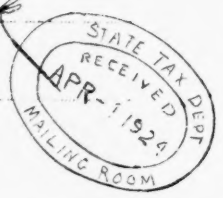
S. F. FORM B

GAS AND ELECTRIC LIGHT AND POWER

REPORT

OF

Consolidated Gas Company of New York



TO THE

STATE TAX DEPARTMENT

OF THE

STATE OF NEW YORK

FOR THE

YEAR ENDED DECEMBER 31, 1923

RECORDED

EXAMINED BY_____

ACKNOWLEDGED 4/1/24 9 A.M.

4413

63. MISCELLANEOUS MATTER.

Hereunder may be shown any additional matters of fact relative to the matters comprehended by the various inquiries and schedules on the preceding pages which the respondent may desire to incorporate in this report. Give full information regarding any condition which in opinion of respondent affects the value of the special franchise and not specifically called for in the schedule contained in this report.

64. PAVING PAID FOR BY RESPONDENT

Give below information by years concerning paving actually paid for by respondent in installing property in streets, highways and public places. Fill in the kind of paving at the head of each column.

Year installed	Cost of each kind of paving laid during each of the years							Total cost of paving
	$	$	$	$	$	$	$	$
19								
19								
19							

CONSOLIDATED GAS COMPANY OF NEW YORK
PROPERTY SCHEDULE - DECEMBER 31, 1925

	Land	Buildings and Contents	Total Land and Plant
East 11th St. Station - 11th St. - 13th St. Ave. D. & East River	$ 1,493,000.00	$ 3,584,228.47	$ 5,077,228.47
East 15th St. Station - 15th St. - Ave. A. & East River	210,000.00	655,783.09	865,783.09
East 21st St. Station - 19th St. - 22nd St. 1st Ave. & Marginal St.	2,268,500.00	4,981,703.88	7,250,203.88
West 42nd St. Station - 42nd St. - 11th Ave. & Hudson River	135,000.00	1,194,944.20	1,329,944.20
West 44th St. Station - 44th St. - 46th St. 11th Ave. & Hudson River	687,000.00	2,016,228.29	2,703,228.29
East 63rd St. Station - 60th St. - 63rd St. 1st Avenue & East River	179,000.00	516,931.91	695,931.91
West 65th St. Station - 64th St. - 66th St. Amsterdam & West End Aves.	1,057,000.00	822,946.87	1,879,946.87
East 99th St. Station - 98th St. - 99th St. 2nd Ave. & Marginal St.	724,000.00	1,136,050.16	1,860,050.16
East 111th St. Station - 110th St. - 112th St. 2nd Ave. & Harlem River	906,750.00	1,118,560.45	2,025,310.45
West 132nd St. Station - 131st St. - 133rd St. Broadway & 12th Avenue	350,500.00	511,786.78	862,286.78
Kingsbridge Station - Harlem River Terrace, Fordham Road & Sedgwick Ave.	250,000.00	925,968.01	1,175,968.01
Engineering and Superintendence	-	521,590.15	521,590.15
Interest during Construction (Cash Discount on Construction Purchases)	-	31,653.94	31,653.94
Office & Shop - Hester & Elizabeth Streets	175,000.00	155,890.42	330,890.42
Storage Yard - East 17th/18th Sts. between Aves. B. & C.	231,500.00	21,811.35	253,311.35
General Office - Irving Place and 15th Street	510,000.00	2,622,291.35	3,132,291.35
Garage - 438/54 West 18th Street	125,500.00	46,317.79	171,817.79
" - 222/8 West 65th Street	55,500.00	76,488.87	131,988.87
Commercial Office - 212 West 57th street	660,000.00	296,340.84	956,340.84
Shop and Yard - 65th - 66th Sts. & West End Avenue	440,000.00	91,309.63	531,309.63
East 60th - 61st Sts. West of Avenue A.	36,000.00	-	36,000.00
Commercial Office - 114th St. & 3rd Avenue	46,500.00	91,195.39	137,695.39
Shop - 474 West 159th Street	21,000.00	64,207.44	85,207.44
Site of Proposed Commercial Office - 166th St. & Audubon Ave.	50,000.00	619.80	50,619.80
Inwood - Sherman Ave., Broadway & Dyckman Street	92,000.00	4,293.90	96,293.90
153rd St. & Cromwell Avenue	200,000.00	-	200,000.00
Hunts Point	2,350,000.00	36,946.02	2,386,946.02
Coke Storage - 626/32 Kent Ave. Brooklyn	60,000.00	2,769.45	62,769.45
	13,313,250.00	21,465,450.57	34,778,700.57
Services outside of Streets, Highways & Public Places - Book Value		1,010,720.21	
Meters	"	4,437,959.04	
Meter Connections	"	452,911.24	
Automobiles & Accessories	"	251,020.75	
Stable Equipment	"	9,886.01	
Scows	"	11,921.20	
Furniture and Fixtures	"	577,874.95	
Tools and Implements	"	210,899.94	
Gas Appliances Rented	"	3,661,656.31	
Laboratory Equipment	"	22,953.17	
		10,647,802.82	
Material and Supplies	"	1,673,773.09	12,321,575.91
			$ 47,100,276.48

7b. PROPERTY SCHEDULE SUMMARY

Town Values and Village Values must be given separately. If Village is in more than one Town, show separately the Values of the property in that portion of the Village in each Town.
Columns 1, 2, 3, 4, 5, 6, are not to include any intangible property, whether they be classed under real property, personal property tax or other statute laws.

The information called for in this schedule must be furnished for each and every tax district.

Tax District Name of city, town or incorporated village	* Taxable real property in streets, highways and public places, exclusive of railroad franchises 1 Cost to reproduce new	2 Present value	Taxable real property outside of streets, highways and public places 3 Cost to reproduce new	4 Present value	Taxable personal property 5 Cost to reproduce new	6 Present value	7 Present value of all taxable property including franchises	8 Last assessment of personal property	9 Last assessment of real estate outside of streets, highways public places and public waters
City of New York Borough of Manhattan	$ 13,207,994,499	$ 13,207,994,499	$ 34,778,700,579	$ 34,778,700,579	$ 12,321,579,491	$ 12,321,579,491	$ 34,178,994,649	$ -0-	Borough of Manhattan
" " " Bronx	1,260,603,511	1,260,603,511							21,513,500
	14,468,598,010	14,468,598,010							Borough of Bronx
									3,711,170
									Borough of Brooklyn
									70,000
			The Railway does not make a claim for a deduction from Gross Revenue of any Rights from Grantors of franchise right of way"					Borough Pres. Comptroller assessed	
								real Estate of Condemnation	
									Borough of Manhattan
									12,500
									Borough of Bronx
									9,000
Total all tax districts	$	$	$	$	$	$	$	$	$
Property located outside New York State									
Grand Total									

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* The accompanying supplemental property reports in support of columns 1 and 2 of this summary, descriptive of property in streets, highways and public places in all tax districts, are an integral part of this report and are included in the verification by reference thereto in this schedule.

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The foregoing Form B " Financial Report " contains 34 pages, all of which must be securely bound within this cover and returned to the State Tax Department on or before March 31, 1924.

The accompanying property schedules are an integral part of this report. A separate blank should be used for each city and for each township (exclusive of incorporated villages) and one for each incorporated village within a township. Additional blanks will be furnished on request if a sufficient number does not accompany the report.

If this report does not contain the proper blanks for the different fields of construction needed to make a satisfactory report, other blanks will be furnished on request.

The law requires that every report made under this section shall have annexed thereto the affidavit of the President, Vice-President, Secretary or Treasurer of the association or corporation, or one of the persons or one of the members of the co-partnership making the same.

STATE OF NEW YORK }
COUNTY OF New York } ss.:

The undersigned H. M. Brundage, being duly sworn, says that he is Secretary of Consolidated Gas Company of New York, that the foregoing annual report (consisting of 39 pages which include schedules of the property and value thereof and of the affairs and financial condition of said company for the year ended December 31, 1923, designated 1, 2, 3, 4, 5, 6, 7, 8-a, 8-b, 9, 10-a, 10-b, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78 and 79) and also the accompanying supplemental reports, referred to in the footnote on Schedule 79 of this report, are true to the best of his knowledge and belief.

Subscribed and sworn to before me, this
31st day of March, 1924. }

Thomas W. Smith Notary Public

NOTARY PUBLIC
New York County No. 391
New York Co. Register's No. 5174
Term Expires March 30, 1925

County, N. Y.

L. S.

H. M. Brundage

4417

DEFENDANTS' EXHIBIT NO. 60

CONSOLIDATED GAS COMPANY

Table 223.

COMPARATIVE SUMMARY OF VALUE OF PROPERTY FOR PURPOSES OF TAXATION 1922 AND 1923 AS REPORTED BY THE COMPANY TO THE STATE TAX DEPARTMENT

	YEAR ENDED DEC. 31, 1922.			YEAR ENDED DEC. 31, 1923.		
	AREA SQUARE FT.	BOOK VALUE	*PRESENT VALUE (PASTER WAS ATTACHED TO REPORT PAGE 38 Form "B")	AREA SQUARE FT.	BOOK VALUE	*PRESENT VALUE (PASTER WAS ATTACHED TO REPORT PAGE 38 FORM "B")
Tangible real property outside of streets, highways, public places and public waters.						
Land other than private rights of way						
1. Land used during the year in connection with operation of special franchise	3,113,458	$10,960,751.26	$13,930,255.00	10,515,776	$10,991,623.65	$13,188,250.00
2. Land not used during the year in connection with operation of special franchise	23,000	75,000.00	131,000.00	20,700	67,500.00	125,000.00
TOTAL	3,136,458	$11,035,751.26	$14,061,255.00	10,536,476	$11,059,123.65	$13.313,250.00
Tangible property outside of streets, highways, public places and public waters. Buildings and other structures and contents.						
1. Reproduction cost new.			VALUE $20,946,981.09			VALUE $21,465,450.57
2. Age.	"The company's records do not contain this information in respect of the majority of our buildings".			"The company's records do not contain this information in respect of the majority of our building".		
3. Present value allowing depreciation			$20,946,981.09			$21,465,450.57
Machinery and other apparatus						
1. Reproduction cost new.	"Valuations included in amounts			"Information required in this schedule included in schedule No. 7".		
2. Present value allowing depreciation	Reported in foregoing figure.			Ditto		
TOTAL			$35,008,236.09			$34,778,700.57

* REPORT CARRIES A PASTER SECURED TO PAGE 38 FORM "B"; MATTER APPEARING ON BOTH IS ATTACHED HERETO.

DEFENDANTS' EXHIBIT NO. 61

CONSOLIDATED GAS COMPANY

INFORMATION GIVEN BY COMPANY ON PAGE 38 of 1922 AND 1923 REPORTS

	TAX DISTRICT NAME OF CITY, TOWN OR INCORPORATED VILLAGE	TANGIBLE REAL PROPERTY IN STREETS, HIGHWAYS AND PUBLIC PLACES, EXCLUSIVE OF PAVING NOT PAID FOR BY THE COMPANY. COST TO REPRODUCE NEW	 PRESENT VALUE	TANGIBLE REAL PROPERTY TOGETHER WITH CONTENTS OF BUILDINGS OUTSIDE OF STREETS, HIGHWAYS AND PUBLIC PLACES. COST TO REPRODUCE NEW	 PRESENT VALUE	TANGIBLE PERSONAL PROPERTY COST TO REPRODUCE NEW	 PRESENT VALUE	PRESENT VALUE OF ALL INTANGIBLE PROPERTY, FRANCHISES, EXCLUDING STATEMENT ATTACHED HERETO	LAST ASSESSMENT OF REAL ESTATE OUTSIDE OF STREETS, HIGHWAYS AND PUBLIC WATERS.
		SEE STATEMENT ATTACHED HERETO.				SEE STATEMENT ATTACHED HERETO			
1922	City of New York:								
	Boro. of Manhattan	$13,228,942.67	$13,228,942.67	$35,008,236.09	$35,008,236.09	$11,820,526.65	$11,820,526.65	$173,804,718.31	Boro. of Manhattan $30,922,000.00 Boro of Bronx $ 1,207,000.00 Boro of Brooklyn $ 70,000.00
	Boro. of Bronx.	1,260,603.51	1,260,603.51						
		$14,489,546.18	$14,489,546.18						
1923	City of New York:								
	Boro. of Manhattan.	$13,307,994.99	$13,307,994.99	$34,778,700.57	$34,778,700.57	$12,321,575.91	$12,321,575.91	$212,192,[illegible]98.69	Boro. of Manhattan $25,513,500.00 Boro. of Bronx $ 2,711,170.00 Boro. of Brooklyn. $ 70,000.00
	Boro. of Bronx.	1,260,603.51	1,260,603.51						
		$14,568,598.50	$14,568,598.50						

THE FOLLOWING NOTE APPEARS ON PAGE 38 OF REPORTS OF BOTH YEARS

\- - -

The company does not make a claim for a deduction from Operating Revenue of any "Receipts from operations of private right of way".

MAINS, PIPES AND CONNECTIONS ASSESSED AS REAL ESTATE OF CORPORATION

Boro. of Manhattan $ 40,500.00

Boro. of Bronx. $ 9,000.00

[fol. 4420] DEFENDANTS' EXHIBIT No. 62

Consolidated Gas Company of New York

(Source: 1922 Report to State Tax Department)

In connection with the respective sums shown in Schedule 79, on page 38 of this report, the following is submitted for the information of the State Tax Commission:

Column 1. The amounts reported represent the actual investment of the company in its distributing system, comprising tangible property in streets, highways and public places, to and including December 31, 1922. The amounts so shown conform to the amounts found by the United States District Court for the Southern District of New York, in this company's rate case, as representing the value of such property. The decree of the said Court embodying such finding was, on March 6, 1922, affirmed by the Supreme Court of the United States without modification in this respect. These amounts so found by the Courts, plus net additions to June 30, 1922, were also found and used by the Public Service Commission of the State of New York, in determining by its Order of August 30, 1922, in its Case No. 79, the rates to be charged by the Company for gas service.

Column 2. See remarks as to Column 1. There being, as was determined by the United States Supreme Court as above stated, no depreciation as to such property, if maintained in a condition of undiminished productivity and operating efficiency as the property of this company is maintained, and no reason for deducting the sum which it would be necessary to spend to put the distributing system of such a company in a condition as good as new, no deduction is made from the sum stated in Column 1.

Column 3. The sum reported as to tangible real property, outside of streets, highways and public places, is based:

(1) As to land, upon an appraisal of such land made during the year 1921 by Brown-Wheelock Company, of 14 Wall Street, New York City; plus net additions to and including December 31, 1922; and

(2) As to improvements, comprising buildings and contents, manufacturing plant and equipment, upon the actual investment of the company in such property to and including December 31, 1922. The amounts so shown conform to the amounts found by the United States District Court for the Southern District of New York, in this company's rate case, as representing the value of such property, and the decree of the said Court, embodying such finding, was, on March 6, 1922, affirmed by the Supreme Court of the United States without modification in this respect. These amounts so found by the Courts, plus net additions to June 30, 1922, were also found and used by the Public Service Commission of the State of New York, in determining by its Order of August 30, 1922, in its Case No. 79, the rates to be charged by the Company for gas service.

Column 4. See remarks as to Column 3. There being, as was held by the United States Supreme Court as above stated, no depreciation as to said property, if maintained in a condition of undiminished productivity and operating efficiency as the property of this company is maintained, and no reason for deducting the sum which it would be necessary to spend to put such property of the company in a condition as good as new, no deduction is made from the [fol. 4421] sum stated in column 3.

Column 5. The valuation reported is that of tangible personal property only. Fixtures and property of a doubtful or mixed character are not included, but are covered by Columns 3 and 4, as hereinbefore stated.

Column 7. The valuation reported consists of the following:

Cash	$8,915,486 83	
Accounts Receivable with System Corporations	867,085 43	
Other Accounts Receivable	2,650,706 00	
Other Intangible Gas Capital	1,009,970 00	
Organization	168,596 13	
		$13,611,844 39

Securities Stocks & Bonds	$152,808,576.23	
Bills Receivable	15,500.00	
Temporary Advances to Associated Companies	6,680,000.00	
Interest & Dividends Receivable	415,763.94	
Other Special Deposits	273,033.75	
		160,192,873.92
		$173,804,718.31

Nothing has been included representing the present value of the intangible franchises. This whole report is made for the purpose of enabling the State Tax Department to determine the value, if any there be, of the company's intangible franchises.

NOTE.—The Company claims that, as the Courts have now held, it is entitled to earn from its gas operations at least eight (8) per cent on the value of the property used in its gas business, and that this return is to be calculated upon the aggregate of Columns 1, 3, 5 and 7, together with the East 14th Street and the West 44th Street land (which is not included in the sum stated in Column 3) until paid for by the City of New York but excluding the value of West 18th Street property (which is included in the sum stated in Column 3), and the securities and obligations reported in Column 7, before any value can be computed for the intangible part of the Special Franchise.

[fol. 4422] DEFENDANTS' EXHIBIT No. 63

Consolidated Gas Company of New York

(Source:—1923 Report to State Tax Dept.)

In connection with the respective sums shown in Schedule 79, on page 38 of this report, the following *us* submitted for the information of the State Tax Commission:

Column 1. The amounts reported represent the actual investment of the company in its distributing system, comprising tangible property in streets, highways and public places, to and including December 31, 1923. The amounts

so shown conform to the amounts found by the United States District Court for the Southern District of New York in this company's rate case, as representing the value of such property. The decree of the said Court embodying such finding was, on March 6, 1922, affirmed by the Supreme Court of the United States without modification in this respect. These amounts so found by the Courts, plus net additions to June 30, 1922, were also found and used by the Public Service Commission of the State of New York, in determining by its Order of August 30, 1922, in its Case No. 79, the rates to be charged by the Company for gas service. Litigation as to this Company's rates, and so as to this Company's properties, is in progress at the time of filing this report, but no findings or determination in respect to the valuation of such properties have yet been made.

Column 2. See remarks as to Column 1. There being, as was determined by the United States Supreme Court as above stated, no depreciation as to such property, if maintained in a condition of undiminished productivity and operating efficiency as the property of this company is maintained, and no reason for deducting the sum which it would be necessary to spend to put the distributing system of such a company in a condition as good as new, no deduction is made from the sum stated in Column 1.

Column 3. The sum reported as to tangible real property, outside of streets, highways and public places, is based:

(1) As to land, upon an appraisal of such land made during the year 1923 by Brown-Wheelock Company, of 14 Wall Street, New York City.

(2) As to improvements, comprising building and contents, manufacturing plant and equipment, upon the actual investment of the company in such property to and including December 31, 1923. The amounts so shown conform to the amounts found by the United States District Court for the Southern District of New York, in this company's [fol. 4423] rate case, as representing the value of such property for the purposes of such case, and the decree of the said Court, embodying such finding, was, on March 6, 1922, affirmed by the Supreme Court of the United States without modification in this respect. These amounts so found by the Courts, plus net additions to June 30, 1922,

were also found and used by the Public Service Commission of the State of New York, in determining by its Order of August 30, 1922, in its Case No. 79, the rates to be charged by the Company for gas service. Litigation as to this Company's rates, and so as to this Company's properties, is in progress at the time of filing this report, but no findings or determination in respect to the valuation of such properties have yet been made.

Column 4. See remarks as to Column 3. There being, as was held by the United States Supreme Court as above stated, no depreciation as to said property, if maintained in a condition of undiminished productivity and operating efficiency as the property of this company is maintained, and no reason for deducting the sum which it would be necessary to spend to put such property of the company in a condition as good as new, no deduction is made from the sum stated in Column 3.

Column 5. See remarks as to Column 3. The valuation reported is that of tangible personal property only. Fixtures and property of a doubtful or mixed character are not included, but are covered by Column- 3 and 4, as hereinbefore stated.

Column 7. The valuation reported consists of the following:

Cash	$2,080,986.82	
Accounts Receivable with System Corporations	894,368.15	
Other Accounts Receivable	3,014,239.15	
Other Intangible Gas Capital	1,009,970.00	
Organization	615,142.93	
		$7,614,707.05
Securities Stocks & Bonds	$175,988,783.89	
Bills Receivable	15,500.00	
Temporary Advances to Associated Companies	26,695,000.00	
Interest & Dividends Receivable	1,325,774.00	
Other Special Deposits	553,033.75	
		204,578,091.64
		$212,192,798.69

Nothing has been included representing the present value of the intangible franchises. This whole report is made for the purpose of enabling the State Tax Department to determine the value, if any there be, of the company's intangible franchises.

NOTE.—The Company claims, that, as the Courts have now held, it is entitled to earn from its gas operations at least eight (8) per cent. on the value of the property used [fol. 4424] in its gas business, and that this return is to be calculated upon the aggregate of Columns 1, 3, 5 and 7, together with the West 44th Street land (which is not included in the sum stated in Column 3) until paid for by the City of New York; but excluding the value of West 18th Street property (which is included in the sum stated in Column 3), and the securities and obligations reported in Column 7, before any value can be computed for the intangible part of the Special Franchise.

(Here follow Defendants' Exhibits Nos. 64, 65, 66, 67, and 68, marked side folio pages 4425, 4426, 4427, 4428, 4429, 4430, 4431, 4432, and 4433)

DEFENDANTS' EXHIBIT NO. 64

DOMESTIC PUBLIC UTILITY STOCK SALES, EXCLUSIVE OF STRICTLY TRANSIT COMPANIES - NEW YORK STOCK EXCHANGE - WEEK ENDED MAY 17, 1924.

Table 230

(FROM "THE ANNALIST" OF MAY 19, 1924)

NAME OF COMPANY	TERRITORY MAINLY OPERATING IN	DESCRIPTION		CURRENT ANNUAL DIVIDEND	NUMBER OF SHARES SOLD	RANGE FOR 1924 HIGHEST	RANGE FOR 1924 LOWEST	RANGE FOR WEEK ENDED MAY 17, 1924. HIGHEST	RANGE FOR WEEK ENDED MAY 17, 1924. LOWEST	*CURRENT RETURN PER CENT ON LOWEST PRICE FOR WEEK
		KIND	PAR VALUE							
American Telephone & Telegraph Co.	All States	Stock	$100	9 %	10,500	130 7/8	123	125 3/4	125 1/8	7.192
American Water Works & El. Co.	Various States	Common	100	None	1,000	51 1/4	40	48 7/8	47 1/4	-
Do	"	First Prf'd.	100	7 %	200	92 3/4	89 1/2	91 1/2	91 1/2	7.650
"	"	Partic. Prf'd.	100	6 %	400	74	66	70 1/2	69 1/2	8.633
Brooklyn Edison Co.	New York	Stock	100	8 %	2,100	116	109	111 1/4	110	7.273
Brooklyn Union Gas Co.	"	Stock	No par	$4.00	800	63 7/8	56 5/8	61 3/4	61	6.557
Columbia Gas & El. Co.	Mid. West	Stock	No par	$2.60	26,900	38	33	37 1/4	34 3/4	7.482
Consolidated Gas Co.	New York	Common	No par	$5.00	14,400	67 3/4	60 7/8	63 7.8	62 5/8	7.982
Detroit Edison Co.	Mich.	Stock	100	8 %	870	108 1/4	103 3/4	104	102 3/4	7.786
Duquesne Light Company	Pa.	First Prf'd	100	7 %	200	106 3/4	102	104	103 7/8	6.738
Kansas City Power & Light Company	Kans. Mo.	Do	No par	$7.00	200	96	92	95	95	7.368
Laclede Gas Light Co.	Mo.	Common	100	7 %	100	96 1/4	79	91	91	7.692
Do	"	Preferred	100	5 %	100	77	73	77	77	6.494
Montana Power Co.	Mont.	Common	100	4 %	200	65	61 1/2	62	62	6.452
Niagara Falls Power Company	N. Y.	Common	100	None	100	47	47	47	47	-
Pacific Gas & El. Co.	California	Common	100	8 %	600	95 7/8	90 1/8	92 1/8	91 3/4	8.719
Pacific Tel. &.Tel. Co.	Pacific Slope	Preferred	100	6 %	100	93 3/4	88	88	88	6.812
Peoples Gas Lt. & Coke Co. (Chi)	Ills.	Stock	100	7 %	400	98 1/4	92 3/4	94 1/4	93	7.527
Philadelphia Company	Pa.	Common	50	4 %	700	47	42 7/8	43 3/4	43 1/8	9.375
Do	"	Preferred	50	3 %	300	43 3/4	42 1/4	42 7/8	42 5/8	7.039
Pittsburg Utilities Company	"	"	10	**12 %	1,000	13 1/4	9 7/8	12	11 5/8	10.322
Public Service Corp. of N. J.	N. J.	Common	None	$4.00	5,500	44 1/2	39	43 5/8	42 1/8	9.496
Do	"	Preferred	100	8 %	600	102	99 1/4	102	101 1/8	7.911
"	"	"	100	7 %	400	100	96 1/2	100	98	7.143
Public Service El. Pow. Co.	"	"	100	7 %	300	98	94 1/4	96 1/8	94 1/4	7.427
Standard Gas & El. Co.	So. & West	Certificates		3	1,900	32 1/2	32	32 1/2	32	9.375
Utah Securities Corp.	Utah	Stock	100	None	5,900	30 3/4	16 5/8	29	28	-
Virginia Railway & Power Co.	Va.	Common	100	None	2,100	40 3/4	36	40 3/4	39 1/2	-

* CURRENT RETURN WAS COMPUTED DUE TO "THE ANNALIST" NOT GIVING SAME.
** THIS RATE OBTAINED FROM COMPANY AND IS PARTLY EXTRA, AND ASSUMES THAT EXTRA DIVIDEND WILL BE PAID REGULARLY.

DEFENDANTS' EXHIBIT NO. 65

Table 231
Sheet No.1

DOMESTIC PUBLIC UTILITY BOND SALES, EXCLUSIVE OF STRICTLY TRANSIT COMPANIES - NEW YORK STOCK EXCHANGE - WEEK ENDED MAY 17, 1924.

(FROM "THE ANNALIST" OF MAY 19, 1924)

NAME OF COMPANY	TERRITORY MAINLY OPERATING IN	DESCRIPTION OF BOND: KIND	MATURITY	RATE PER CENT OF INTEREST	SALES FOR WEEK	RANGE FOR 1924: HIGHEST	RANGE FOR 1924: LOWEST	RANGE FOR WEEK ENDED MAY 17, 1924.: HIGHEST	RANGE FOR WEEK ENDED MAY 17, 1924.: LOWEST	*YIELD ABOUT PER CENT AT LOWEST SALE FOR WEEK
American Tel. & Tel. Co.	All States	Collateral Trust	1929	4	154	95 1/2	92 3/8	95 1/2	95	5.147
Do	Do	Convertible	1933	4 1/2	14	109	103 1/4	103 1/2	103 1/4	4.098
"	"	Collateral Trust	1946	5	148	99 1/4	97 1/8	99 1/8	98 5/8	5.114
"	"	Convertible	1925	6	17	123	117	118 1/4	117	-
"	"	Debenture	1943	5 1/2	568	101 1/4	98 1/4	101 1/4	100 3/4	5.457
American Water Works & El. Co.	Various Stat.	Collateral Trust	1934	5	19	88	84 1/8	87 1/2	87	6.814
Atlanta Gas Light Co.	Georgia	First	1947	5	1	97	96 1/2	97	97	5.226
Bell Telephone Co. of Pa.	Pennsylvania	Refunding	1948	5	105	99 1/8	97 1/4	99	98 3/4	5.109
Brooklyn Edison Company	New York	General	1949	5	11	100 1/4	97 1/2	100 1/4	99 3/4	5.035
Do	"	" Ser. B	1930	6	28	106	102 1/2	103 1/2	103	5.408
"	"	" " C	1930	7	1	109	105 5/8	107	107	5.610
"	"	" " D	1940	7	19	109 5/8	108	109	108 3/8	6.204
Brooklyn Union Gas Company	"	Consolidated	1945	5	5	99 1/2	96 3/8	99 1/2	99	5.078
Do	"	Refunding	1947	6	14	105 1/2	103 1/2	105	104 7/8	5.648
"	"	Convertible	1929	7	11	120 1/2	114	118 3/4	118 1/4	-
"	"	"	1932	7	20	121	114	118 7/8	118 1/8	-
California Gas & El. Co.	California	Refunding	1937	5	10	98 3/8	97 1/8	98 1/4	97 1/4	5.323
Central District Tel. Co.	Pennsylvania	First Sinking Fund	1943	5	3	99 1/2	97 3/4	99 1/2	99 3/8	5.083
Chicago Gas Lt. & Coke Company	Illinois	First	1937	5	3	97	93 1/2	97	96 1/4	5.433
Cincinnati Gas & El. Co.	Ohio	Refunding	1956	5	2	98 1/4	94 1/4	98	98	5.128
Do	"	"	1961	5 1/2	18	99	96 1/2	98 5/8	97 3/4	5.662
Columbia Gas & El. Co.	Ohio, W.Va.	First (?)	1927	5	104	99	96 1/4	99	98 5/8	5.550
Do	Do	First (?) - Stamped-	1927	5	56	99	96 1/4	99	98 3/4	5.457
Commonwealth Power Corporation	Mid. West	Sinking Fund	1947	6	69	92 1/2	87	92	90 7/8	6.824
Do	Do	do Register	1947	6	1	90	90	90	90	6.871
Consolidated Power & Light Co.	Va. W. Va.	Refunding A	1943	6 1/2	16	99 1/2	95 1/8	97 1/2	97	6.783
Connecticut Railway & Ltg.Co.	Conn.	Refunding-Stamped-	1951	4 1/2	1	84 1/2	80 1/4	83 3/4	83 3/4	5.705
Consumers Gas Co. Chi.	Ills.	First	1936	5	2	95 1/4	93 1/2	95 1/8	95 1/8	5.577
Consumers Power Co. of Mich.	Mich.	First & Unifying	1952	5	17	89 5/8	86 7/8	88 3/4	88 1/4	5.879
Cumberland and Telephone & Tel.Co.	So. States	First & General	1937	5	5	95 1/2	94 1/8	95 1/8	95 1/8	5.545
Detroit Edison Co.	Mich.	Refunding A	1940	5	47	98	95	98	97 1/2	5.233
Do	"	"	1940	6	44	106 1/4	104	106	105 3/8	5.525
"	"	Collateral Trust	1933	5	3	100 1/2	99 3/4	100 1/2	100 1/4	5.000
Duquesne Light Company	Pennsylvania	"	1949	6	39	105 1/4	103 1/4	104 3/4	104 3/8	5.698
Edison El. Illum Co. (Bklyn)	New York	First Consolidated	1939	4	2	90 1/4	89	89 1/4	89 1/4	5.055
Empire Gas & Fuel Company (Del)	Ks.Ok.Texas	First & Ref'g Con.A	1937	7 1/2	155	93 3/4	90	91	89	8.949
Equitable Gas Light Company	New York	First	1932	5	3	96	93 3/4	96	96	5.628
Great Falls Power Company	Mont.	First	1940	5	27	100	98	100	100	5.000
Illinois Bell Tel. Co.	Ills.	Refunding	1956	5	141	95 1/4	93 1/2	95 1/4	94 7/8	5.361
Kansas City Power & Light Co.	Mo. Ks.	First A	1952	5	105	93 3/8	89	92	91 1/4	5.643
Kings Co. El. Lt. & Power Co.	New York	First	1937	5	22	100	98 5/8	99 1/2	99	5.106
Kings Co. Lighting Company	"	Refunding	1954	6 1/2	3	100 3/4	95	100 1/2	100	6.500
Laclede Gas Light Co.of St.Louis	Mo.	Refund'g & Extn	1934	5	4	95	92	94 7/8	94 3/4	5.730
Do	Mo.	Refunding C	1953	5 1/2	40	93 1/4	91 5/8	92 7/8	92 3/8	6.091
Louisville Gas & El.Co.	Ky.	First & Refund'g	1952	5	14	91 1/4	88 1/8	89 1/8	88 5/8	5.839

DOMESTIC PUBLIC UTILITY BOND SALES, EXCLUSIVE OF STRICTLY TRANSIT COMPANIES - NEW YORK STOCK EXCHANGE - WEEK ENDED MAY 17, 1924.

(FROM "THE ANNALIST" OF MAY 19, 1924)

NAME OF COMPANY	TERRITORY MAINLY OPERATING IN	DESCRIPTION OF BOND			SALES FOR WEEK	RANGE FOR 1924		RANGE FOR WEEK ENDED MAY 17, 1924.		*YIELD ABOUT PER CENT AT LOWEST SALE FOR WEEK
		KIND	MATURITY	RATE PER CENT OF INTEREST		HIGHEST	LOWEST	HIGHEST	LOWEST	
Metropolitan Edison Company	Pa.	First & Refunding B	1952	6	17	100 1/4	97 3/4	100 1/4	100	6.000
Metropolitan Powers Company	Pa.	First	1953	6	24	97 1/2	94 1/2	97	96 1/4	6.302
Milwaukee Gas Light Company	Wis.	First	1927	4	6	97	94 1/2	96 3/4	96 1/2	5.277
Montana Power Co.	Mont.	Refunding	1943	5	56	97 1/2	95	96 5/8	95 1/2	5.381
New Eng. Tel. & Tel. Co.	N.E.States	First	1952	5	41	99 3/8	97 1/4	98 7/8	98 1/2	5.109
Newark Consolidated Gas Co.	N.J.	Consolidated	1948	5	2	95 1/8	93 5/8	95 1/8	95 1/8	5.373
New York Edison Co.	N.Y.	Refunding	1941	6 1/2	43	111 7/8	109 7/8	111 1/4	110 3/4	5.539
N. Y. Gas, El. Lt., Heat & Power Co.	N.Y.	First	1948	5	34	101	98 1/4	101	100	5.000
Do	N.Y.	Purchase Money	1949	4	5	86	82 1/2	84 3/8	84 1/8	5.145
New York & Queens El. & P. Co.	N.Y.	First Consolidated	1930	5	3	99 3/4	98	99 1/2	99 1/2	5.098
New York & Richmond Gas Co.	N.Y.	First Refunding	1951	6	5	95	89	94	94	6.473
New York Steam Corp.	N.Y.	First	1947	6	9	96 1/2	92 1/2	96	95 3/4	6.376
New York Telephone Company	N.Y.	First & General	1939	4 1/2	54	95 1/2	93 3/8	95 1/2	94 5/8	5.026
Do	N.Y.	Debenture S. F.	1949	6	46	107 3/4	105 7/8	107	106 5/8	5.518
"	N.Y.	Refunding	1941	6	104	105 7/8	104	105 1/2	105	5.542
Niagara Falls Power Company	N.Y.	First	1932	5	7	101 3/8	99	100 5/8	100 1/2	4.924
Do	N.Y.	General	1932	6	9	105 1/2	103 3/4	105	104	5.378
Niagara Lockport & Ont. Pow.Co.	N.Y.	Refunding	1958	6	9	103	99	102 5/8	102	5.864
Northwestern Bell Telephone Company	N.W.	First	1941	7	68	108 1/2	107 1/2	108	107 3/4	6.276
North American Edison Co.	Mid. West	B	1948	6 1/2	30	98 1/2	95	97 1/2	97	6.754
Do	Do	Secured S. F.	1952	6	36	93 3/4	91 1/4	92 1/2	92	6.632
Northern Ohio	Ohio		1945	5	1	86 3/4	84 1/2	86	86	6.201
Northern Ohio Traction & Light Co.	Ohio	Refunding	1947	6	19	93	88 1/8	91 1/2	90	6.871
Northern States Power Company	N.W.	"	1941	5	76	92 7/8	89 1/4	92 1/2	91 7/8	5.743
Northern States Power Company	N.W.	First & Ref. B	1941	6	34	103 7/8	101	102 5/8	102	5.813
Ohio Public Service Co.	N.W.	Refunding	1946	7 1/2	6	105 1/2	103 3/4	104 3/4	104 5/8	7.093
Do	N.W.	"	1947	7	6	102 7/8	100 1/4	102 1/8	102	6.826
Pacific Gas & El. Co.	California	General & Refunding	1942	5	50	93 1/4	90 3/4	92 3/8	91 7/8	5.717
Pacific Power & Light Co.	"	First Refunding	1930	5	24	95 7/8	92 1/2	95 1/2	95	6.005
Pacific Telephone & Tel.Co.	"	First & Coll.	1937	5	91	98 3/4	96	98 3/4	98 3/8	5.160
Pacific Telephone & Telegraph Co.	"	Refunding	1952	5	45	92 1/2	90 5/8	92 1/8	91 3/4	5.605
Peoples Gas Light & Coke Co.(Chi)	Illinois	First & Refunding	1947	5	19	92	87 1/4	92	91 7/8	5.668
Do	"	Consolidated	1943	6	2	107	104 1/4	107	107	5.406
Philadelphia Co.	Pennsylvania	Refunding & Coll.Tr.	1944	6	74	102 5/8	99 5/8	101 3/4	101 1/4	5.914
Do	"	Convertible Debenture	1938	5 1/2	23	92 3/4	90	92	91 1/4	6.488
Portland Railway Light & Power Co.	Oregon	First & Refund'g Convert	1942	5	11	87	80 3/8	85	84 1/2	6.470
Do	"	Refunding	1947	6	35	94	89 1/4	94	92 1/2	6.641
"	"	First & Refunding	1946	7 1/2	2	104 3/4	103	103 1/2	103 1/8	7.226
Public Service El. Power Co.	N. J.	First Sink. Fund	1948	6	51	99 1/2	97	99 1/2	99 1/8	6.080
Public Service Corp.	N. J.	Sinking Fund	1959	5	44	91 1/8	77	89 7/8	89	5.732
San Antonio Public Service Co.	Texas	First & Refunding	1952	6	8	96 7/8	93 3/4	95 5/8	95	6.386

DOMESTIC PUBLIC UTILITY BOND SALES, EXCLUSIVE OF STRICTLY TRANSIT COMPANIES - NEW YORK STOCK EXCHANGE - WEEK ENDED MAY 17, 1924.

(FROM "THE ANNALIST" OF MAY 19, 1924)

NAME OF COMPANY	TERRITORY MAINLY OPERATING IN	DESCRIPTION OF BOND			RATE PER CENT OF INTEREST	SALES FOR WEEK	RANGE FOR 1924 HIGHEST	RANGE FOR 1924 LOWEST	RANGE FOR WEEK ENDED MAY 17, 1924. HIGHEST	RANGE FOR WEEK ENDED MAY 17, 1924. LOWEST	*YIELD ABOUT PER CENT AT LOWEST SALE FOR WEEK
		KIND		MATURITY							
Sierra & San Francisco Power Co.	California	First		1949	5	6	88	83 3/4	84 3/4	84 5/8	6.231
Southern Bell Telephone Co.	So. States			1941	5	43	96 1/2	94	95 7/8	95 1/4	5.455
Southern Colo. Power Co.	Colo.	First	A	1947	5	8	91	87	88 3/8	88	5.966
Southwestern Bell Telephone Co.	S.W. States	Refunding		1954	5	393	94 1/2	93	94 1/4	93 3/4	5.442
Standard Gas & Electric Co.	" " "	Convertible Debenture		1933	6 1/2	17	98 1/2	94 1/2	95 1/2	94 5/8	7.346
Do	" " "	Convertible S. F.		1926	6	8	105	100	104 7/8	104 7/8	3.520
Syracuse Lighting Company	New York	First		1951	5	2	95 1/4	92	95	95	5.352
Tennessee Electric Power Co.		Refunding		1947	6	68	96 1/4	93 5/8	96	95 3/4	6.376
Toledo Edison Co.	Ohio	First		1941	7	27	108	106	107 5/8	107 1/4	6.322
Toledo Traction Light & Power Co.	Ohio	Gold Coupon		1925	6	30	100	98 1/2	100	99 5/8	5.525
Union El. Lt. & Power Co.	Mo.	Refunding & Exten.		1933	5	43	96 3/4	92	95 3/4	95 5/8	5.645
United Fuel Gas Co.	W. Va.	Sinking Fund	A	1936	5	15	97 1/2	92 1/2	95 7/8	95 1/4	5.577
Utah Light & Traction Co.	Utah	First & Refunding		1944	5	40	86 3/8	80	82 1/2	81 5/8	6.691
Utah Power & Light Company	Utah	First		1944	5	87	91 1/2	87 1/4	90 1/2	89 7/8	5.901
Utica Gas & El. Co.	N. Y.	Refunding & Ext'n.		1957	5	2	94	90 1/8	93 1/4	93	5.460
Virginia Railway & Power Co.	Va.	First & Refunding		1934	5	24	91	88	90 1/4	89 1/4	6.514
West Penn. Power Co.	Pa.	First	A	1946	5	14	93	89 3/8	92	91 1/8	5.725
Do	"	First	C	1958	6	4	102 3/4	101	02 3/4	103 1/2	5.830
"	"	First	D	1946	7	18	106 1/2	104 1/4	06	105 1/2	6.526
"	"	First	E	1963	5	8	89 1/4	86 3/4	87 3/4	87 3/8	5.844

* YIELDS TAKEN FROM BOND TABLE.

DEFENDANTS' EXHIBIT NO. 66

RETURN TO INVESTORS IN PUBLIC UTILITY SECURITIES
(ADVERTISEMENTS BY FINANCIAL HOUSES IN COMMERCIAL AND FINANCIAL CHRONICLE)

Table 234
Sheet No.

B O N D S

COMPANY	STATE	DESCRIPTION OF SECURITY	MATURITY	AMOUNT OFFERED	RATE of INTEREST (%)	PRICE AT WHICH OFFERED	ADVERTISED YIELD (%) (ABOUT)	ADVERTISEMENT APPEARS IN ISSUE OF DATE	PAGE	OFFERED BY
County Gas Co. Dallas Gas Co.	Texas	1st Mtge. Gold Bonds 1st Mtge. Gold Bonds	10/1/41 10/1/41	$ 600,000 1,800,000	6 6	96 97½	6.37 6.22	5/5/23	XXXII	16-17
Ill. Power & Light Corp.	Ill.	Sinking Fund Debenture Gold Bonds	4/1/53	10,000,000	7	100	7.00	5/5/23	XXXIII	1-2-5-6-7-10-12
Counties Gas & Ele.Co. (Phila.)	Pa.	1st & Ref. Mtge Gold Bonds	5/1/53	6,600,000	6	98	6.15	5/5/23	XXXVII	8
Arkansas Central Power Co.	Ark.	1st Lien & Ref. Mtge Gold Bonds	4/1/48	2,500,000	6	94½	6.45	5/5/23	XXXIII	3-9-18
Washington Gas Light Co.	D. C.	10 yr. Mtge Gold Bonds Series A	4/1/33	4,000,000	6	100	6.00	5/12/23	XXVII	3-13
Potomac Elec. Lt. & Power Co.	D. C.	Gen'l & Ref. Mtge Gold Bonds Ser. B	4/1/53	4,000,000	6	101½	5.88	5/19/23	XXV	3-13
Jersey Central Pow. & Lt. Corp.	N.J.	1st Lien Sink. F. Gold Bonds Ser. A	5/1/48	3,500,000	6½	97	6.75	5/26/23	XXVII	15-21
Kansas Gas & Elec. Co.	Kan.	1st Mtge Sink. Fund Gold Bonds	3/1/52	3,500,000	6	95½	6.35	5/26/23	XXVIII	22
Metropolitan Power Co.	Pa.	1st Mtge Gold Bonds Series A	6/1/53	3,250,000	6	96	6.30	6/2/23	XXIV	23-24-25-26
Potomac Edison Company	Md.	1st Mtge Gold Bonds Series A	5/1/48	3,900,000	6½	97	6.75	6/2/23	XXV	4-7-12-27-28
Dubuque Electric Company	Iowa	1st Mtge Gold Bonds	4/1/42	3,000,000	6	98½	6.15	6/9/23	XXVIII	24-29
Western States Gas & Elec. Co.	Calif.	1st & United Mtge Gold Bonds Ser. A.	3/1/47	2,000,000	6	96	6.30	6/9/23	XXXI	2-30
Northern N. Y. Utilities Inc.	N.Y.	1st Lien & Ref. Bonds Series C.	5/1/43	2,212,000	6	99	6.10	6/16/23	XXVI	7-33
Illinois Bell Telephone Co.	Ill.	1st & Ref. Mtg. Gold Bonds Series A.	6/1/56	50,000,000	5	95-1/4	5.30	6/16/23	XXIX	3-13-34-35-36-37-38-39-
San Joaquim Lt. & Power Co.	Calif.	Unifying & Ref. Mtg. Gold Bonds Ser. B.	3/1/52	3,500,000	6	99 & int	6.05	6/23/23	XXVI	80-2-65
Memphis Power & Lt. Co.	Tenn.	1st & Ref. Mtg. Gold Bonds Series B.	1/1/48	2,000,000	6	99½& int	6.00	6/23/23	XXVIII	39-3
Carolina Power & Lt. Co.	N.C.	1st & Ref. Mtg. Gold Bonds Series A	6/1/53	2,500,000	6	97½& int	6.15	6/23/23	XXX	9-14
Virginia Western Power Co.	Va.	1st Mtge Sink.F.Gold Bonds Series A	7/1/53	3,500,000	6	95	6.38	7/14/23	XXVII	23-26-41-42
Penn-Ohio Edison Co.	Pa.-Ohio	3½ Year Secured Gold Notes	1/1/27	3,250,000	6½	98	7.15	7/21/23	XXVI	9-43
United Lt. & Railway Co.	Ia.-Ill.	First Lien & Con.Mtg.Gold Bonds. Ser.A.	4/1/52	1,000,000	6	96½& int	6.25	7/28/23	XXIII	9
Interstate Publ. Ser. Co.	Ind.-Ky.	1st. Mtg. & Ref. Gold Bonds.	2/1/48	7,192,000	6	91½& int	6.70	8/4/23	XXXI	4-7-15
North American Edison Co.	Wis-Ohio-Mo.	Secured Sink.F.Gold Notes Series B	9/1/48	8,000,000	6½	98½	6.63	8/18/23	XXIII	22
Los Angeles Gas & El. Corp.	Calif.	Gen. & Ref. Mtg Gold Bonds Series G	3/1/42	4,000,000	6	99½& int	6.00	8/25/23	XXII	61-7-62-3
Southern Arizona Power Co.	Ariz.	1st & Ref. Mtg Gold Bonds	2/1/38	675,000	6½	95½	7.00	9/1/23	XIX	44
Indiana El. Corp.	Ind.	1st Mtge Gold Bonds Series B	8/1/53	2,700,000	6½	99	6.57	9/1/23	XXI	1-15-17-18-45
Staten Island Edison Corp.	N. Y.	Ref. & Improvement Mtge Gold Bonds	7/1/53	3,807,000	6½	99	6.50	9/1/23	XXII	1-5-46-47
Ohio River Edison Co.	Ohio-Pa.	1st Mtge Sinking Fund Gold Bonds	7/1/48	7,000,000	6	95	6.40	9/15/23	XXIV	9-43
Pacific Gas & Elec. Co.	Calif.	1st & Ref. Mtge Gold Bonds	12/1/52	10,000,000	5½	95½	5.80	9/22/23	XXXII	2-7-13
Ohio Power Co.	Ohio	1st & Ref. Mtge Gold Bonds Series C	9/1/53	6,000,000	6	99	6.07	9/22/23	XXXIII	22-40
Kansas Electric Power Co.	Kan.	1st Mtge Gold Bonds	6/1/43	1,000,000	6	96	6.35	9/29/23	XXIV	9-14
Pub. Ser. Company of Colorado	Colo.	1st Mtge & Ref. Gold Bonds Series A	9/1/53	5,000,000	6	93	6.55	10/6/23	XXVII	4-15
Queens Borough Gas & Elec. Co.	N.Y.	Ref. Mtge Gold Bonds	9/1/53	2,000,000	6	99½	6.00	10/6/23	XXVII	9-14
Kentucky Utilities Co.	Ky.-Va.	1st Mtge Lien Gold Bonds Series D	9/1/48	2,265,000	6½	98½	6.63	10/13/23	XXI	4
Penn. Power & Lt. Co.	Pa.	1st & Ref. Mtge Bonds Series C	9/1/53	4,000,000	6	99	6.07	10/13/23	XXV	3-4-39-49
American Public Service Co.	Okla.-Tex.	First Lien Gold Bonds	12/1/42	1,500,000	6½	96-8/10 & int	6.80	10/20/23	XXIII	4-15
Philadelphia El. Co.	Penn.	First Lien & Ref. Mtg. Gold Bonds	11/1/53	10,000,000	5½	98½& int	5.60	10/27/23	XXVIII	8-49-3
Southern Calif. Edison Co.	Calif.	Refunding Mtg. Gold Bonds	10/1/43	11,500,000	6	98½& int	6.12	10/27/23	XXVII	3-7-42
Public Service Co. of Colo.	Colo.	Gold Debentures (10 yr.Con.S.F.)	10/1/33	2,250,000	7	98-1/4 & int.	7.25	10/27/23	XXIV	15-52
Houston Ltg. & Power Co.	Tex.	1st.Lien & Ref. Mtg. Gold Bonds Ser. B.	10/1/53	2,000,000	6	98½& int.	6.10	10/27/23	XXI	4

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General Structures (137) ..... Not Applicable

RETURN TO INVESTORS IN PUBLIC UTILITY SECURITIES
(ADVERTISEMENTS BY FINANCIAL HOUSES IN COMMERCIAL AND FINANCIAL CHRONICLE)

BONDS

COMPANY	STATE	DESCRIPTION OF SECURITY	MATURITY	AMOUNT OFFERED	RATE OF INTEREST (%)	PRICE AT WHICH OFFERED	ADVERTISED YIELD (%) (ABOUT)	ADVERTISEMENT APPEARS IN ISSUE OF DATE	PAGE	OFFERED BY
Portland RY. Lt. & Power Co.	Ore.	1st. Lien & Ref. Mtg.Gold Bonds. Ser.B.	5/1/47	$2,000,000	6	92½ & int	6.62½	10/27/23	XX	.13-4
Amer. Tel. & Tel. Co.	All States	20 yrs. S. F. 5½% Debenture Gold Bonds	11/1/43	100.000,000	5½	98½ & int	5.62½	11/10/23	XXVII	34-35-36
Ills. Power & Light Co.	Ills.Ia.Kans.	1st & Ref. Mtg. Gold Bonds Ser. A.	4/1/53	5,000,000	6	98½ & int	6.10	11/10/23	XXV	7-3-1
Tenn. El. Power Co.	Tenn.	10 yr. 6½% Debenture Bonds	10/1/33	1,000,000	6½	96 & int	7.05	11/10/23	XXIV	13-9
Penn. Water & Power Co.	Pa.	1st. Ref. Mtg. Gold Bonds Series A.	10/1/53	2,000,000	5½	95-3/4 &int	5.80	11/17/23	XXVII	53-54
Miss. Power & Light Co.	Miss.	1st. & Ref.Mtg.S.F. Gold Bonds Ser. A.	6/1/43	1,200,000	6½	94½ & int	7.00	11/17/23	XXVI	14-55
Nev.-Calif. Elec. Corp.	Nev.-Calif.	1st Lien Gold Bonds Series B	10/1/50	1,000,000	6	94 & int	6.45	11/17/23	XXV	1-2
Minn. Power & Light Co.	Minn.-Wisc.	1st. & Ref. Mtg. Gold Bonds	11/1/50	8,300,000	6	97-3/4 &int	6.15	11/24/23	XXIX	3-9-18-42
Penn. Central Lt. & Pr. Co.	Pa.	1st & Ref. Mtg. Gold Bonds	12/1/53	10,300,000	6	98 & int	6.15	11/24/23	XXVIII	8-49
Northern States Power Co.	Minn.Wisc.Ill.	Convertible Gold Notes	11/1/33	10,000,000	6½	98½ & int	6.70	11/24/23	XXVII	39-1-30
Northern States Power Co.	Minn.Ill.Wis.	1st Lien & Gen. Mtg.GoldBonds. Ser.A.	11/1/48	8,500,000	6	97½ & int	6.20	12/8/23	XXX	3-39-30
Southern Pub.Utilities Co.	N.C.-S.C.	1st & Ref. Mtg. Gold Bonds	7/1/43	4,000,000	5	91-1/4 &int	5.75	12/8/23	XXIX	8-24-45-46
Phila.Suburban Gas.& El.Co.	Pa.	1st & Cons.Mtg.Gold Bonds 6% Series.	12/1/43	3,650,000	6	96=1/2 &int	6.30	12/8/23	XXVIII	56-8-31
Community Power & Lt. Co.	Tex.Kans.Ark.	1st Mtg.Coll.S.F.Gold Bonds Ser. C	10/1/33	1,718,000	6½	98 & int	6.80	12/8/23	XXIV	57-58-59
Roch. Gas. & El. Co.	N. Y.	Gen.Mtg. 25 yr.Gold Bonds Series C.	9/1/48	4,000,000	5½	95½ & int	5.85	12/15/23	XXVII	34-3-13-37-39-38
United Light & Rys. Co.	Mid.West	First Lien & Con.Mtg. Gold Bonds Ser.A.	4/1/52	1,000,000	6	95 & int	6.37½	12/15/23	XXIV	9
West Penn Power Co.	Pa.	1st. Mtg. Gold Bonds Ser. F.	10/1/53	7,500,000	5½	95-1/8 &int	5.85	12/22/23	XXVI	4-60-27
Phila. Rapid Transit Co.	Pa.	Two Yr. Gold Notes	12/1/25	3,500,000	6	99-1/4 &int	6.40	12/22/23	XXIV	22
Ohio Power Co.	Ohio	1st & Ref. Mtg. Gold Bonds	9/1/53	2,000,000	6	98½ & int	6.11	12/22/23	XXV	22-40-48
American Gas & El. Co.	East & Midwest	Gold Debenture Bonds	5/1/2014	3,500,000	6	95 & int	6.30	12/22/23	XXII	9
No.N.Y.Utilities Co.	N. Y.	1st Lien & Ref'g Bonds Series C	5/1/43	1,183,000	6	99 & int	6.10	12/22/23	XXI	7-33
Commonwealth Edison Co.Ch.	Ill.	Gold Bonds Series A (1st Mtg. Coll.)	7/1/53	15,000,000	5	92½ & int	5.50	12/22/23	XXVIII	4
Public Ser.Co.of No. Ills.	Ill.	Gold Bonds Ser.A.(1st Lien & Ref.Mtg.)	6/1/62	10,000,000	5½	92 & int	6.05	12/29/23	XXV	4
Phila. Rapid Transit Co.	Pa.	Mtg.Gold Bonds (Real Estate First)	1/1/44	2,500,000	6	100 & int	6.00	1/12/24	XXXII	22
Market Street Ry. Co.	Calif.	1st.Mtg. S.F. Gold Bonds	4/1/40	13,000,000	7	100 & int	7.00	1/12/24	XXXI	22-60-51
Kentucky Utilities Company	Ky.-Va.	1st. Mtg. Lien Gold Bonds Series D.	9/1/33	2,000,000	6½	98½ & int	6.62½	1/12/24	XXIX	4
Los Angeles Gas & El. Co.	Calif.	Genl. & Ref. Mtg.Gold Bonds Ser. H.	3/1/42	8,000,000	6	99 & int	6.05	1/19/24	XXXI	61-7-3-2-62
N.Y.State Gas & El. Co.	N.Y.	1st Mtg. Gold Bonds	10/1/62	2,350,000	5½	92½ & int	6.00	1/19/24	XXIV	5-63
Southern Calif. Gas. Co.	Calif.	1st & Refg.Mtg. Gold Bonds Ser. C	6/1/58	1,500,000	6	98 & int	6 1/8	1/19/24	XXIII	64-2-65
San Antonio Publ.Service	Tex.	1st. Mtg. & Ref. Gold Bonds Ser. A.	1/1/52	1,750,000	6	95 & int	6 3/8	1/19/24	XXII	4-66-67
Union El. Light & Power Co.	Mo.	1st. Mtg. Gold Bonds Series A	1/1/54	10,000,000	5½	95-3/4&int	5.90	1/26.24	XXX	22-3-1
Potomac Edison Co.	Md.Va.Pa.W.Va.	1st Mtg.& Ref. Gold Bonds	5/1/48	2,000,000	6½	97 & int	6.75	1/26/24	XXVIII	7-4-27-28
Interstate Pub.Ser.Co.	Ind.Ky.	1st. Mtg. & Ref. Gold Bonds Ser. B	1/1/34	2,750,000	6½	98 & int	6.65	1/26/24	XXIII	7-4-27-28
San Joaquin Lt. & Pow. Co.	Calif.	Unifying & Ref.Mtg.Gold Bonds Ser.B.	3/1/52	2,500,000	6	99 & int	6.05	1/26/24	XXII	64-2-65
Maryland El Rys. Co.	Md.	1st. & Ref. Mtg. Gold Bonds Ser. A.	1/1/57	4,000,000	6½	100 & int	6.50	2/2/24	XXVII	68-7
Southwestern Bell Tel. Co.	Mo.Kans.Ark.Ok.	1st. & Ref. Gold Bonds Series A.	2/1/54	50,000,000	5	93½ & int	5.45	2/2/24	XXX	35-36-34
Syracuse Lighting Co.	N.Y.	1st. & Ref. Mtg. Gold Bonds	2/1/54	7,000,000	5½	97 & int	5.70	2/9/24	XXVIII	8
Con. Gas & El. Col	Mo.	Coll. Trust Gold Bonds Series A.	2/1/54	5,700,000	7	100 & int	7.00	2/9/24	XXV	69-64-70-71-72
Washington Water Power Co.	Wash.	Cupon Notes	2/2/26	1,000,000	6	100-3/4&int	5.80	2/9/24	XVII	76
American Gas Co.	Eastern & Midwest	10 yr. S.F. Secured Gold Bonds	1/1/34	2,500,000	7	99 & int.	7.10	2/9/24	XXII	56-31

RETURN TO INVESTORS IN PUBLIC UTILITY SECURITIES
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B O N D S

COMPANY	STATE	DESCRIPTION OF SECURITY	MATURITY	AMOUNT OFFERED	RATE OF INTEREST (%)	PRICE AT WHICH OFFERED	ADVERTISED YIELD (%) (ABOUT)	ADVERTISEMENT APPEARS IN ISSUE OF DATE	PAGE	OFFERED BY
Ohio Power Company	Ohio	1st & Ref. Gold Bonds Ser. C.	9/1/53	$ 2,000,000	6	99 & int	6.00	2/9/24	XX	22-40-48
Central Ills. Pub.Ser.Co.	Ill.	1st Mtg. & Refg. Gold Bonds. Ser. C.	1/1/44	2,000,000	6	94 & int	6.55	2/9/24	XIX	4
Peoples Gas Light & Coke Co.	Ill.	Secured Gold Notes	3/1/27	5,750,000	6	100 & int	6.00	2/23/24	XIX	4-77
Eastern N.J. Power Co.	N. J.	1st Mtg. Gold Bonds	1/1/49	3,250,000	6	95 & int	6.40	3/1/24	XXXIV	9-14-73
Sioux City Gas & El. Co.	Iowa	1st. Mtg. 25 yr. Gold Bonds Ser. B.	2/1/49	2,550,000	6	98 & int	6.15	3/1/24	XXXV	4
Tenn. El. Power Co.	Tenn.	1st & Ref. Mtg. Gold Bonds Ser. A	6/1/47	3,000,000	6	96 & int	6.30	3/1/24	XXXVII	13-9-74-4-5
Central Ind. Power Co.	Ind.	Three yr. Coll.Gold Notes	3/1/27	6,500,000	7	100 & int	7.00	3/8/24	XXVII	4
Southern Calif. Edison Co.	Calif.	Ref. Mtg. Gold Bonds	10/1/43	14,000,000	6	99 & int	6.08	3/22/24	XXI	3-7-42
Houston Lighting & Pow. Co.	Texas.	1st Lien & Ref.Mtg.Gold Bonds Ser. C	3/1/54	2,000,000	5½	96½ & int	5.75	3/29/24	XXVI	4
Allentown-Bethlehem Gas Co.	Penn.	1st. Mtg. Gold Bonds	4/1/54	2,500,000	5½	97 & int	5.70	3/29/24	XXXIV	8
Duquesne Light Co. (Pittsburgh)	Penn.	1st Mtg. & Coll. Trust Gold Bonds.Ser.B.	7/1/49	10,000,000	5½	99 & int	5.57	3/29/24	XXXVI	3-37-40-50-51
Columbia Gas & El. Co.	Ohio	One yr. Notes	3/1/25	11,500,000	5	100 & int	5.00	3/29/24	XXIX	43-39
Yuba River Power Co.	Calif.	1st. Mtg. 6% Serial Gold Bonds	10/1/24-10/1/48	1,150,000	6	Yield from 6.to 6.5%		4/5/24	XXIV	79-80
Southwestern Power & Lt. Co.	Tex.	1st Lien 5% Gold Bonds	6/1/43	3,500,000	5	88-3/4&int.	6.00	4/5/24	XXV	9-4
Consumers Power Co.	Mich.	1st Lien & Unifying Mtg. Gold Bonds	5/1/54	8,500,000	5½	95½ & int	5.82	4/12/24	XXVII	13-82-83-84
Penn. Elec. Corp.	Penn.	30 Yr. S. F. Gold Deben.	4/1/54	5,000,000	6½	93-3/4&int	7.00	4/12/24	XXXIV	7-26-5
Metropolitan Edison Co.	Penn.	1st & Ref.Mtg.Gold Bonds Ser. C.	1/1/53	2,150,000	5	89½ & int	5.75	4/12/24	XXXV	4
Pacific Gas & Elec. Co.	Calif.	1st & Ref. Mtg.Gold Bonds Ser. C.	12/1/52	12,500,000	5½	96 & int.	5.78	4/19/24	XXV	13-7-62-2
Arkansas Lt. & Power Co.	Ark.	1st.Lien & Ref.Mtg. S.F. Gold Bonds	3/1/54	1,650,000	6	92 & int.	6.63	4/26/24	XIX	55
American Power & Lt. Co.	Various	Gold Deb. Bonds	3/1/2016	5,000,000	6	93½ & int.	6.40	4/26/24	XXI	9
Birmingham Elec. Co.	Ala.	1st. & Ref. Mtg. Gold Bonds	4/1/54	8,000,000	6	97½ & int.	6.18	4/26/24	XXV	3-9-18-6-78
United Light & Power Co.	Mid-West	1st.Lien & Con. Mtg. Gold Bonds	4/1/59	3,500,000	5½	90 & int.	6.20	5/3/24	XXV	9

DEFENDANTS' EXHIBIT NO. 67

RETURN TO INVESTORS IN PUBLIC UTILITY SECURITIES
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STOCKS

COMPANY	STATE	DESCRIPTION OF SECURITY	MATURITY	AMOUNT OFFERED	RATE OF INTEREST (%)	PRICE AT WHICH OFFERED	ADVERTISED YIELD (%) (ABOUT)	ADVERTISEMENT APPEARS IN ISSUE OF DATE	PAGE	OFFERED BY
Eastern Conn. Power Company	Conn.	Cumulative 1st Pref. Stock	Redeemable at option of Company at 120	1,500,000	7	100 & Div.	7.00	5/26/23	XXVI	19-20
Consolidated Power & Lt. Co.	Ky.	Cumulative Preferred Stock		1,500,000	7	93½ & Div.	7.50	6/16/23	XXIV	1-18-31
Jersey Central Power & Lt.Corp.	N.J.	Cumulative Particip. Pref.St.	Participates up to #3 per share addn'l	1,250,000	7	92½ & Div.	7.57	6/16/23	XXV	32
Tenn. Elec. Power Co.	Tenn.	Cumulative 1st Pref. Stock		1,500,000	7	91	7.70	10/13/23	XXIV	9
Ohio River Edison Co.	Ohio	Cum. Graranteed Pref. Stock		3,000,000	7	93½ & Div.	7.50	11/10/23	XXII	9-43
Indiana Power Co.	Ind.	Cum. Par. Pref. Stock		500,000	7	90 & Div.	7.78	12/1/23	XXIII	14
Southwestern Pow. & Light Co.	Tex.	Cum. Pref. Stock		1,400,000	7	96½ & Div.	7.25	1/19/24	XXVII	9
Con. Gas & Elec. Co.	Mo.Ks. Ia.Neb.	Prior Pref. Stock		5,000,000	7	92½ & Div.	7.57	2/2/24	XXVI	70-69-71-64
Gen'l Gas & El.	N.E. States Pa. & N.Y.	Cum.Pref. Stock Class A.		600,000	8	101½ & Div.	7.85	2/9/24	XXIV	23-75
N. Car. Pub. Ser. Co.	N.C.	Cum. Pref. Stock		1,500,000	7	91 & Div.	7.70	3/8/24	XXV	75
Nebraska Power Company	Neb.Ia.	Cum. Pref. Stock		1,000,000	7	98 & Div.	7.14	3/8/24	XXIV	14-78
Consolidated Power & Light Co.	Various	Cum. Pref. Stock		1,000,000	7	93½ & Div.	7.50	4/5/24	XXII	18-1-2-31
Jersey Central Po. & Lt. Corp.	N.J.	Cum. Partic. Pref. Stock.		1,250,000	7	92½ & Div.	7.50	4/12/24	XXV	32-81-72
Southwestern Power & Light Co.	Texas	Cum. Pref. Stock		1,000,000	7	96½ & Div.	7.25	4/19/24	XXXI	9
Consolidated Gas Electric Light & Power Co. of Baltimore	Md.	Cum. Pref. Stock Series C.		2,000,000	6.5	101 & Div.	6.45	4/19/24	XXIII	1-54
United Amer. Elec. Co.	Various	Bankers Shares				14-1/8	7.00	4/26/24	XXIV	85
Niagara, Lockport & Ontario Power Co.	N. Y.	Cum. Pref. Stock		3,000,000	7	102½	7.00	5/3/24	XXIV	86-87

DEFENDANTS' EXHIBIT NO. 68

Table 236

INDEX OF STOCK AND BOND BROKERS

- - -

1. Spencer, Trask & Co.
2. Blyth, Witter & Co.
3. Harris, Forbes & Co.
4. Halsey, Stuart & Co. Inc.
5. Marshall, Field Glore Ward
6. Central Trust Co. of Ill.Chic.
7. E. H. Rollins & Sons
8. Drexel & Co.
9. Bonbright & Co.
10. Bodell & Co.
11. H. T. Holtz & Co. Chicago
12. Hambleton & Co.
13. National City Co.
14. W. C. Langley & Co.
15. A. B. Leach & Co.
16. Arthur Perry & Co.
17. Paine Webber & Co.
18. Tucker Anthony & Co.
19. Putnam & Co. Hartford
20. Chas. W. Scranton & Co.
21. A. C. Allyn & Co.
22. Dillon Read & Co.
23. West & Company
24. Blodgett & Co.
25. Parsly Bros. & Co.
26. Edw. B. Smith & Co.
27. W. A. Harriman & Co.
28. Dominick & Dominick
29. Arthur Perry & Co.
30. H.M. Byllesby & Co. Inc.
31. Stroud & Co.
32. A. E. Fitein & Co.
33. F. L. Carlisle & Co. Inc.
34. J. P. Morgan & Co.
35. Kuhn Loeb & Co.
36. Kidder, Peabody & Co.
37. First Nat. Bank of N. Y.
38. Bankers' Trust Co. of N. Y.
39. Guaranty Co. of N. Y.
40. Lee,Higginson & Co.
41. W. H. Neubold's Sons & Co.
42. Coffin & Burr, Inc.
43. Eastman, Dillon & Co.
44. T. B. Crews Jr. & Co.
45. Stone & Webster Inc.
46. Estabrook & Co.
47. Raymond H. Smith & Co.
48. Cont'l. & Comm.Trust & Sav.Bank,Ohio.
49. Brown Bros. & Co.
50. Hayden Stone & Co.
51. Ladenburg, Thalman & Co.
52. Federal Securities Corp.
53. Aldred & Co.
54. Chase & Co.
55. John Nickerson & Co.
56. Bioren & Co.
57. W. L. Ross & Co. Inc.
58. Whitaker & Co.
59. Liberty Central Trust Co.
60. Union Trust Co. of Ptgh.
61. Bond & Godwin & Tucker
62. Mercantile Securities Co.
63. Jamey & Co.
64. Pierce Fair & Co.
65. Banks, Huntley & Co.
66. Lehman Bros.
67. Goldman, Sachs & Co.
68. Alex. Brown & Sons.
69. Otis & Co.
70. Howe, Snow & Bartles
71. Pearsons-Taft & Co.
72. R. E. Wilsey & Co.
73. Hoagland, Allum & Co.Inc.
74. Hemphill, Hayes & Co.
75. Pinchon & Co.
76. White Weld & Co.
77. Ills. Merchants Trust Co.
78. Old Colony Trust Co.
79. First Securities Co.
80. Anglo London Paris Co.
81. Frederich Pierce & Co.
82. Cassa & Co.
83. Graham, Parsons & Co.
84. Hodenpyl, Hardy & Co.
85. Bonner, Brooks & Co.
86. Blair & Co., Inc.
87. Schoelkopf, Hutton & Pomercy,
88. Cyrus, Pierce & Co. Inc.

Note: The numbers before each name are for the purpose of showing by whom the offers on Tables 234 and 235 were made.

Not Admissible

[fol. 4434] DEFENDANTS' EXHIBIT No. 72

Astoria Light, Heat & Power Co., 1922

301. Fixed Capital, December 31, 1908 (Account No. 100)

1. With respect to fixed capital in service on December 31, 1908, give hereunder in column (b) the book cost of that portion in service at the beginning of the year, in column (c) the book cost of all such property retired from service during the year and in column (d) the book cost of the property remaining in service at the close of the year, itemized in each case according to the accounts on the books at December 31, 1908, which were combined to make up the said account Fixed Capital, December 31, 1908. Give first electric capital, secondly, gas capital, and, thirdly, other departments, specifying each such department. Improvements on leased property should be shown separately.

Equipment and other property transferred from one location to another should not be included under retirements.

No entries are required in this schedule on the part of corporations that have reclassified this account in accordance with the classifications prescribed for transactions subsequent to December 31, 1908, when such reclassification has received the approval of the Public Service Commission.

Line No.	Name of sub-account (a)	Book cost of portion in service at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost of portion in service at close of year (d)	Remarks (e)
1	Real Estate	$1,892,367.37	.....	1,892,367.37	
2	Plant	7,552,939.19	.....	7,552,939.19	
3	Piers & Bulkheads	277,458.45	.....	277,458.45	

301. Fxed Capital, December 31, 1908—Continued

Line No.	Name of sub-account (a)	Book cost of portion in service at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost of portion in service at close of year (d)	Remarks (e)
4	Railroad Equipment	71,653.38	3,633.54	68,019.84	
5	Tools & Implements	1,751.30	350.26	1,401.04	
6	Office Furniture & Fixtures	1,791.28	.....	1,791.28	
7	Horses, Wagons & Harness	323.43	.....	323.43	
8	Boats and Scows	11,526.12	.....	11,526.12	
9	Street Mains	2,680.40	.....	2,680.40	
10	Meters and Connections	60.72	.....	60.72	
11	Services	400.10	.....	400.10	
12	Interest on Construction Expend.	997,301.79	.....	997,301.79	
	Total	10,810,253.53	3,983.80	10,806,269.73	

2. State whether or not the book cost of the foregoing represents actual money cost or cost in terms of securities issued or assumed by respondent.

3. Describe the property retired from service during the year, giving in particular the location, name of builder or maker, date of construction or erection, character of construction, cost, size, capacity, and the like. In case the records of the respondent do not disclose the actual cost of

Fixed Capital Installed Since 1908—B. Gas Department, General Department and Other Departments

In schedules 306-308 on this page report the same particulars concerning cost of utility property other than electrical as those required on preceding page for electrical property. If respondent supplies both gas and electricity, the cost of property used jointly in the two services should be given in schedule under 307—General Gapital.

Line No.		Account (a)	Cash cost to beginning of year (b)	Installed within the year (c)	Retired from service in current year (d)	Adjustments, credits (e)	Cash cost to close of year (f)
1		306. Gas Capital	$ c.	$ c.	$ c.	$ c.	$ c.
2	Intangible Land	Occupied by gas works (110a)	1,019,053.33	441,749.01	14,762.94		1,446,039.40
3		Occupied by outside holder stations (110b)					
4		Water rights (110c)					
5		Other land (110d)					
6	Intangible	Organization (101)	4,750.00	12,515.00			17,265.00
7		Franchises (gas) (102)					
8		Patent rights (gas) (103)					
9		Assessments	17.35	15.18			32.53
10	Tangible Gas Capital	General structures (121)					
11		General equipment (122)	220,014.24	38,679.25			258,693.49
12		Works and station structures (221)	2,882,655.93	207,851.18	400.00	623.97	3,089,483.14
13		Holders (222)	793,378.51	91,748.39			885,126.90
14		Furnaces, boilers and accessories (141a)	421,202.66	64,104.08			485,306.74
15		Steam-engines (141b)					
16		Gas engines (143b)					
17		Miscellaneous power plant equipment (145)					
18		Benches and retorts (223)	361,540.75	40,455.82	14,649.25		387,347.32
19		Water-gas sets and accessories (143a)	2,331,691.64	323,679.88	3,250.00		2,652,121.52
20		Purification apparatus (224)	1,794,386.14	137,917.90			1,932,304.04
21		Accessory equipment at works (225)	2,378,387.94	710,895.00	1,802.84	690.00	3,086,790.10
22		Trunk lines and mains (231)					
23		Gas services (232)					
24		Gas meters (233)	18.93	36.88			55.81
25		Gas-meter installation (234)					
26		Municipal street lighting fixtures (235)					
27		Gas engines and appliances (236)	9.68				9.68
28		Gas tools and implements (237)	84,100.72	25,038.68	22,095.11		87,044.29
29		Gas laboratory equipment 238)					
30		Other tangible gas capital (239)					
31		Engineering and superintendence (281)	363,762.89	192,161.66			555,924.55
32		Law expenditures during construction (282)					
33		Injuries during construction (283)					
34		Taxes during construction (284)					
35		Interest during construction (285)	286,907.85	1,086.51			285,821.34
36		Miscellaneous construction expenditures (286)	293,823.32	117,493.70	5,708.90		405,608.12
37		Unfinished construction	921,064.70	920,064.70		1,000.00	
38		Total	14,156,766.58	1,483,190.40	62,669.04	2,313.97	15,574,973.97
39		307. General Capital					
40		Organization (101)					
41		General structures (121)		Not Applicable			
42		General equipment (121)					
43							
44		Total					
45		308. Other Departments					
46		Street and interurban Intangible					
47		Street and interurban Tangible		Not Applicable			
48		District steam heating Intangible					
49		District steam heating Tangible					
50							
51							
52		Total					

retired property, the estimated cost or ledger value should be stated in accordance with par. 15 of the modifying order, and the fact of estimation stated in a footnote. If the specific description of property retired during the year is given elsewhere in this report, it need not be repeated here but may be embodied herein by appropriate citations.

Fixed Capital December 31, 1908, as above	$3,983.80
Fixed Capital Installed since December 31, 1908—page 22	25,574.75
Shown in detail on page 27	29,558.55

(Here follows side folio page 4435)

[fol. 4436] The Astoria Light, Heat & Power Company

Analysis of Additions Made to and Withdrawals or Retirements Made From "Fixed Capital Installed Since December 31, 1908," During Year 1923

P. S. C. Page 22

		Additions during the year	Withdrawals or retirements
Land Devoted to Gas Operations:			
Improvements on Real Estate	$134,777.46		
Luyster Creek Bulkhead	306,971.55		
		$441,749.01	$14,762.94
Organization	.....	12,515.00	
Assessments	.....	15.18	
General Equipment:			
Railroad Equipment, Standard Gauge	30,364.63		
Office Furniture and Fixtures	875.15		
Automobile and Accessories	1,283.56		
Boats and Scows	6,155.91		
		38,679.25	
Works and Station Structures:			
Steel Storage Bldg. #3	9.42		
Fire Brick Shed #2	1,360.98		
Hose Houses	102.33		
Railroad	27,216.02		1,023.97
Sulphate of Ammonia Plant—Buildings	4,550.37		

Laboratory	2.70		
Storage Tanks adj. to Sulphate Plant	9.30		
"C" Generator House	4,883.81		
"D" —do—	14,535.53		
"D" tar Extractor House	397.39		
"C & D" Exhauster House	517.55		
"C & D" Pump House	2,565.60		
"D" Relief Holders	24,309.11		
"D" Emulsion Separating Tank	2,288.76		
"C & D" Boiler House #2	515.89		
"C & D" Oil Tanks	89,520.67		
Oxide Yards	21.77		
Mess Hall	30,943.43		
Main Gate House & Gate	359.96		
"C" & "D" Boiler House #2—Chimney	3,250.59		
"C" & "D" Meter House	490.00		
		207,851.18	
Holders:			
Storage Holder #2		91,748.39	
Furnaces, Boilers and Accessories:			
"C & D" Boiler House #1—Contents	2,944.03		
"C & D" Boiler House #2—Contents	59,193.91		
"A & B" Boiler House Contents	1,966.14		
		64,104.08	
Forward		$856,662.09	$15,786.91

Analysis of Additions Made—Continued

		Additions during the year	Withdrawals or retirements
[fol. 4437] Forward		$856,662.09	$15,786.91
Benches and Retorts:			
"A" Retort House Contents	$788.70		
"B" " " "	39,667.12		
		40,455.82	14,649.25
Water Gas Sets and Accessories:			
"C" Generator House—Contents	18,332.15		
"D" Generator House—Contents	305,347.73		
		323,679.88	3,250.00
Purification Apparatus:			
"D" Shaving Scrubbers	8,315.91		
"D" Tar Extractor House—Contents	7,093.39		
"D" Purifier	75,252.84		
"D" Condensers	34,833.64		
"C & D" Separators	12,385.69		
"B" Purifier House—Contents	36.43		
		137,917.90	

Accessory Equipment at Works:			
Shop & Office Building Contents	7,670.98		
General Electric Distribution System	22,572.70		
Electric Power House—Contents	6,362.15		
Permanent Fresh Water System	921.02		
Laboratory Contents	327.80		
Coal Hdlg. App. adj. to "B" Ret. House	14,549.51		
"A" & "B" General Connections	623.94		
"A" & "B" Cyanogen Plant	33.92		
Sulphate of Ammonia Plant—Contents	114,858.96		
Coal Hdlg. App.—Coal Storage Bridge	1,742.55		
" " " — " Unload. Towers	5.00		
" " " —No. of "C" Gener. Hse.	6,196.79		
Fuel Hdlg. App. adj. to "D" Gener. Hse.	44,571.21		
Ash —do—	18,922.28		
"C & D" Pump House—Contents	18,368.92		2,192.84
"C & D" Meter House—Contents	17,714.44		
"C & D" General Connections	52,387.66		
"C & D" Exhauster House—Contens	30,128.89		300.00
Oil Pump Hse.—Sec. F Bulkhead—Contents	1,002.88		
Mess Hall Contents	1,506.10		
Photometer & Calorimeter Hse.—Contents	1,500.00		
Luyster Creek Coal Unloading Bridge	348,927.30		
		710,895.00	

Analysis of Additions Made—Continued

		Additions during the year	Withdrawals or retirements
Gas Meters:			
Meters and Connections		36.88	
Gas Engines and Appliances			
Gas Tools and Implements:			
Tools and Implements		25,038.68	22,095.11
Forward		$2,094,686.25	$58,274.11
[fol. 4438] Forward		$2,094,686.25	$58,274.11
Engineering and Superintendence:			
Engineering Department		192,161.66	
Miscellaneous Construction Expenditures:			
Sundry Expense	$84,912.83		
Repairs to Tools & Implements	2,741.87		
Demolishing Buildings	8.04		8.04
Office Expense	29,775.67		
Repairs to Railroad Equipment	55.29		
Temporary Structures		117,493.70	5,700.86
Interest During Construction		1,086.51	
Undistributed Construction		920,064.70	1,000.00
Grand Total		$1,483,190.40	$64,983.01

DEFENDANTS' EXHIBIT No. 73

Astoria Light, Heat & Power Company, 1923

301. Fixed Capital, December 31, 1908 (Account No. 100)

1. With respect to fixed capital in service on December 31, 1908, give hereunder in column (b) the book cost of that portion in service at the beginning of the year, in column (c) the book cost of all such property retired from service during the year and in column (d) the book cost of the property remaining in service at the close of the year, itemized in each case according to the accounts on the books at December 31, 1908, which were combined to make up the said account Fixed Capital, December 31, 1908. Give first electric capital, secondly, gas capital, and, thirdly, other departments, specifying each such department. Improvements on leased property should be shown separately.

Equipment and other property transferred from one location to another should not be included under retirements.

No entries are required in this schedule on the part of corporations that have reclassified this account in according with the classifications prescribed for transactions subsequent to December 31, 1908, when such reclassification has received the approval of the Public Service Commission.

Name of sub-account (a)	Book cost of portion in service at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost of portion in service at close of year (d)	Remarks (e)
Real Estate	$1,892,367.37	.....	$1,892,367.37	
Plant	7,640,938.97	87,999.78	7,552,939.19	
Piers & Bulkheads	281,161.32	3,702.87	277,458.45	
Railroad Equipment	71,653.38	.....	71,653.38	
Tools & Implements	2,189.12	437.82	1,751.30	
Office Furniture & Fixtures	1,791.28	.....	1,791.28	

301. Fixed Capital, December 31, 1908—Continued

Name of sub-account (a)	Book cost of portion in service at beginning of year (b)	Credits during year on account of withdrawals and retirements (c)	Book cost of portion in service at close of year (d)	Remarks (e)
Horses, Wagons & Harness	323.43	.....	323.43	
Boats & Scows	11,526.12	.....	11,526.12	
Street Mains	2,680.40	.....	2,680.40	
Meters & Connections	60.72	.....	60.72	
Services	400.10	.....	400.10	
Interest on Const. Expenditures	997,301.79	.....	997,301.79	
Total	10,902,394.00	92,140.47	10,810,253.53	

2. State whether or not the book cost of the foregoing represents actual money cost or cost in terms of securities issued or assumed by respondent.

3. Describe the property retired from service during the year, giving in particular the location, name of builder or maker, date of construction or erection, character of construction, cost, size, capacity, and the like. In case the records of the respondent do not disclose the actual cost of retired property, the estimated cost or ledger value should be stated in accordance with par. 15 of the modifying order, and the fact of estimation stated in a footnote. If the specific description of property retired during the year is given elsewhere in this report, it need not be repeated here but may be embodied herein by appropriate citations.

Fixed Capital December 31, 1908 as above	$92,140.47
Fixed Capital Installed Since December 31, 1908—Page 22	62,669.04
Shown in detail on page 27	$154,809.51

(Here follows side folio page 4440)

Fixed Capital Installed Since 1908—B. Gas Department, General Department and Other Departments

In schedules 306-308 on this page report the same particulars concerning cost of utility property other than electrical as those required on the preceding page for electrical property. If respondent supplies both gas and electricity, the cost of property used jointly in the two services should be given in schedule under 307—General Capital.

Line No.		Account (a)	Cash cost to beginning of year (b)	Installed within the year (c)	Retired from service in current year (d)	Adjustments (e)	Cash cost to close of year (f)
1		306. Gas Capital.					
2	Land	Occupied by gas works (110a)	$1,446,039.40	$527,073.06			$1,973,112.46
3	Land	Occupied by outside holder stations (110b)					
4	Land	Water rights (110c)					
5	Land	Other land (110d)					
6	Intangible	Organization (101)	17,265.00	30,287.75			47,552.75
7	Intangible	Franchises (gas) (102)					
8	Intangible	Patent rights (gas) (103)					
9	Intangible	Assessments	32.53	.93			33.46
10	Tangible Gas Capital	General structures (121)					
11	Tangible Gas Capital	General equipment (122)	258,693.49	47,492.48	$2,346.23		303,839.74
12	Tangible Gas Capital	Works and station structures (221)	3,089,483.14	37,460.14			3,126,943.28
13	Tangible Gas Capital	Holders (222)	885,126.90	4,602.42			889,729.32
14	Tangible Gas Capital	Furnaces, boilers and accessories (141a)	485,306.74	2,087.53			487,394.27
15	Tangible Gas Capital	Steam-engines (141b)					
16	Tangible Gas Capital	Gas engines (143b)					
17	Tangible Gas Capital	Miscellaneous power plant equipment (145)					
18	Tangible Gas Capital	Benches and retorts (223)	387,347.32	9,711.22			397,058.54
19	Tangible Gas Capital	Water-gas sets and accessories (143a)	2,652,121.52	89,690.50	1,852.50		2,739,959.52
20	Tangible Gas Capital	Purification apparatus (224)	1,932,304.04	116.26			1,932,420.30
21	Tangible Gas Capital	Accessory equipment at works (225)	3,086,790.10	617,800.72			3,704,590.82
22	Tangible Gas Capital	Trunk lines and mains (231)					
23	Tangible Gas Capital	Gas services (232)					
24	Tangible Gas Capital	Gas meters (233)	55.81				55.81
25	Tangible Gas Capital	Gas-meter installation (234)					
26	Tangible Gas Capital	Municipal street lighting fixtures (235)					
27	Tangible Gas Capital	Gas engines and appliances (236)	9.68				9.68
28	Tangible Gas Capital	Gas tools and implements (237)	87,044.29	18,499.66	21,376.02		84,167.93
29	Tangible Gas Capital	Gas laboratory equipment (238)					
30	Tangible Gas Capital	Other tangible gas capital (239)					
31	Tangible Gas Capital	Engineering and superintendence (281)	555,924.55	54,101.40			610,025.95
32	Tangible Gas Capital	Law expenditures during construction (282)					
33	Tangible Gas Capital	Injuries during construction (283)					
34	Tangible Gas Capital	Taxes during construction (284)					
35	Tangible Gas Capital	Interest during construction (285)	285,821.34	1,158.58			284,662.76
36	Tangible Gas Capital	Miscellaneous construction expenditures (286)	405,608.12	20,623.13			426,231.25
37	Tangible Gas Capital	Unfinished construction					
38		Total	15,574,973.97	1,458,388.62	25,574.75		17,007,787.84
39		307. General Capital.					
40		Organization (101)					
41		General structures (121)		Not Applicable			
42		General equipment (121)					
43							
44		Total					
45		308. Other Departments.					
46		Street and interurban railroad Intangible					
47		Street and interurban railroad Tangible		Not Applicable			
48		District steam-eating Intangible					
49		District steam-eating Tangible					
50							
51							
52		Total					

Analysis of Additions made to, and Withdrawals or Retirements made from, "Fixed Capital Installed Since December 31, 1908" During Year 1923

P. S. C., Page 22

		Additions during the year	Withdrawals or retirements
Land Devoted to Gas Operations:			
Improvements on Real Estate	$94,059.72		
Luyster Creek Bulkhead	416,565.53		
North Shore Crib Bulkhead	16,447.81		
		$527,073.06	
Organization	.....	30,287.75	
Assessments	.....	.93	
General Equipment:			
Automobiles & Accessories	15,054.23	.....	$2,346.23
Railroad Equipment—Standard Gauge	24,706.24		
Railroad Equipment—Narrow Gauge	5,721.00		
Boats & Scows	1,640.86		
Office Furniture & Fixtures	370.15		
		47,492.48	

Analysis of Additions Made—Continued

		Additions during the year	Withdrawals or retirements
Works & Station Structures:			
Mess Hall	3,082.29		
Railroad	12,246.65		
Main Gate House & Gate	6,526.30		
Coal Grinding & Sampling House	79.01		
Sulphate Plant Buildings	7,281.84		
"C" Generator House	15.93		
"C & D" Oil Tanks	3,248.62		
"D" Generator House	1,155.42		
Coal Grinding & Sampling House	.70		
"D" Relief Holder	126.90		
"C & D" Pump House	23.26		
Drip Oil Separating Tank	3,671.25		
Laboratory	1.97		
		37,460.14	
Holders:			
Storage Holder No. 2	.....	4,602.42	
Furnaces, Boilers & Accessories:			
"A & B" Boiler House Contents	6.74		
"C & D" Boiler House No. 1 Contents	1,082.74		
"C & D" Boiler House No. 2 Contents	998.05		
		2,087.53	
Forward	.....	**$649,004.31**	**$2,346.23**

[fol. 4442] Benches & Retorts:

"A" Inclined Retort House Contents	$1,402.16		
"B" Horizontal Retort House Contents	8,309.06		
		9,711.22	
Water Gas Sets & Accessories:			
"C" Generator House Contents	10,886.48		1,852.50
"D" Generator House Contents	78,804.02		
		89,690.50	
Purification Apparatus:			
"D" Tar Extractor House Contents	58.16		
"A" Purifier House Contents	1.60		
"D" Condensers	56.50		
		116.26	
Accessory Equipment at Works:			
Electric Power House Contents	27,111.27		
General Electric Dist. System	19,831.07		
Mess Hall Contents	7,519.98		
Permanent Fresh Water System	12,951.01		
Luyster Creek Coal Handling Plant	481,870.61		
Coal Hdlg. App. Adj. to "A" Ret. Hse.	287.50		
Coal Hdlg. App. Adj. to "B" Ret. Hse.	446.54		
Sulphate Plant Buildings Contents	3,336.11		
"A & B" Meter House Contents	40.60		
Coal Hdlg. App. No. of "C" Gener. Hse.	2,610.58		
Ash Hdlg. App. Adj. to "D" Gener. Hse.	509.33		

Analysis of Additions Made—Continued

		Additions during the year	Withdrawals or retirements
Fuel Hdlg. App. Adj. to "D" Gener. Hse.	2,960.47		
"C & D" Pump House Contents	2,298.32		
"C & D" Meter House Contents	40.60		
"A & B" General Connections	3,847.68		
"C & D" General Connections	234.32		
"C & D" Exhauster House Contents	930.95		
Photometer & Calorimeter Hse. Contents	8,051.31		
Laboratory Contents	1,543.71		
Coal Hdlg. App.—Coal Unldg. Towers	40,455.38		
Coal Hdlg. App.—Coal Storage Bridge	907.90		
"A & B" Cyanogen Plant	15.48		
		617,800.72	
Gas Tools & Implements:			
Tools & Implements	.....	18,499.66	21,376.02
Engineering & Superintendence:			
Engineering Department	.....	54,101.40	
Miscellaneous Construction Expenditures:			
Sundry Expense During Construction	10,686.12		
Office Expense During Construction	6,964.80		
Repairs to Tools & Imps. during Const.	2,972.21		
		20,623.13	
Interest During Construction	.....	1,158.58	
Grand Total	.....	**$1,458,388.62**	**$25,574.75**

[fol. 4443] DEFENDANTS' EXHIBIT No. 74

The Astoria Light, Heat & Power Company

Comment on Table 104

This table and its schedules, "A", "B" and "C" show the balances of fixed capital on December 31, 1918 and December 31, 1923 as classified in the Company's Reports to the Public Service Commission, together with the additions and retirements for the intervening years for those same classifications, also reported by the company.

[fol. 4444] The Astoria Light, Heat & Power Company

Fixed Capital—Additions and Retirements, 1919 to 1923, Inclusive

Account	Balance Dec. 31, 1918	Additions for five year period	Retirements for five year period	Balance Dec. 31, 1923
Fixed Capital—December 31, 1908	$10,911,670	.....	$105,400	$10,806,270
Land Occupied by Gas Works	748,346	$1,239,529	14,763	1,973,112
Organization	4,750	42,803	.....	47,553
Assessments	.....	33	.....	33
General Equipment	83,901	223,786	3,847	303,840
Works & Station Structures	839,688	2,303,446	16,191	3,126,943
Holders	1,596	888,133	.....	889,729
Furnaces, Boilers & Accessories	95,054	392,340	.....	487,394
Benches & Retorts	152,546	259,162	14,649	397,059

Comment on Table 104—Continued

Account	Balance Dec. 31, 1918	Additions for five year period	Retirements for five year period	Balance Dec. 31, 1923
Water Gas Sets & Accessories	665,455	2,083,812	9,307	2,739,960
Purification Apparatus	405,223	1,528,917	1,720	1,932,420
Accessory Equipment at Works	725,036	2,999,972	20,417	3,704,591
Gas Meters	19	37	.....	56
Gas Engines & Appliances	23	.....	13	10
Gas Tools & Implements	58,358	125,648	99,838	84,168
Engineering & Superintendence	197,465	412,561	.....	610,026
Interest During Construction	159,994	124,846	177	284,663
Miscellaneous Construction Expenditures	193,511	239,849	7,129	426,231
Unfinished Construction	.....	1,823	1,823	.....
	$15,242,635	$12,866,697	$295,274	$27,814,058

The Astoria Light, Heat & Power Company

Fixed Capital—Additions, 1919 to 1923, Inclusive

Account	1919	1920	1921	1922	1923	Total
Land Occupied by Gas Works.	$67,759	$99,661	$103,288	$441,748	$527,073	$1,239,529
Organization	.....	.....	.....	12,515	30,288	42,803
Assessments	.....	17	.....	15	1	33
General Equipment	7,950	123,164	6,500	38,679	47,493	223,786
Works & Station Structures..	23,458	1,284,734	749,942	207,852	37,460	2,303,446
Holders	.....	.....	791,782	91,749	4,602	888,133
Furnaces, Boilers & Accessories	.....	213,939	112,210	64,104	2,087	392,340
Benches & Retorts	587	263	208,145	40,455	9,712	259,162
Water Gas Sets & Accessories	17,330	861,108	792,002	323,681	89,691	2,083,812
Purification Apparatus	.....	902,350	488,533	137,918	116	1,528,917
Accessory Equipment at Works	152,529	490,526	1,028,221	710,895	617,801	2,999,972
Gas Meters	.....	.....	.....	37	.....	37
Gas Engines & Appliances	.....	.....	.....	.....	.....	.....
Gas Tools and Implements	18,881	32,273	30,955	25,039	18,500	125,648
Engineering & Superintendence	11,342	47,331	107,625	192,162	54,101	412,561
Interest during Construction.	.....	101,715	25,377	R- 1,088	R- 1,158	124,846
Misc. Construction Expenditures	10,035	43,341	48,356	117,494	20,623	239,849
Unfinished Construction	.....	1,782,050	R- 860,162	R- 920,065	.....	1,823
Total	$309,871	$5,982,472	$3,632,774	$1,483,190	$1,458,390	$12,866,697

[fol. 4446]

DEFENDANTS' EXHIBIT No. 76

The Astoria Light Heat & Power Company

Fixed Capital—Retirements, 1919 to 1923, Inclusive

Account	1919	1920	1921	1922	1923	Total
Fixed Capital Installed Prior to December 31, 1908 (Sch. "C")	$7,105	$684	$1,487	$92,141	$3,983	$105,400
Land Occupied by Gas Works.	.....	.....	.....	14,763	.....	14,763
Organization	.....	.....	.....	.....	.....	.....
Assessments	.....	.....	.....	.....	.....	.....
General Equipment	.....	996	505	.....	2,346	3,847
Works and Station Structures.	350	14,817	.....	1,024-C	.....	16,191
Holders	.....	.....	.....	.....	.....	.....
Furnaces, Boilers & Accessories.	.....	.....	.....	.....	.....	.....
Benches & Retorts	.....	.....	.....	14,649	.....	14,649
Water Gas Sets & Accessories.	4,204	.....	.....	3,250	1,853	9,307
Purification Apparatus	.....	.....	1,720-B	.....	.....	1,720
Accessory Equipment at Works.	920	9,609-A	7,395	2,493-D	.....	20,417
Gas Meters	.....	.....	.....	.....	.....	.....
Gas Engines and Appliances	.....	13	.....	.....	.....	13
Gas Tools and Implements	16,048	18,960	21,359	22,095	21,376	99,838
Engineering and Superintendence	.....	.....	.....	.....	.....	.....

Interest during Construction..	177	.....	.....	.....	.....	177
Miscellaneous Construction Expenditures	1,420	.....	.....	5,709	.....	7,129
Unfinished Construction.....	.....	.....	823	1,000-E	.....	1,823
Total	$30,224	$45,079	$33,289	$157,124	$29,558	$295,274

A—Includes adjustment of $7,009.
B— " " " 220.
C— " " " 624.
D— " " " 690.
E—Adjustment.

[fol. 4447]

DEFENDANTS' EXHIBIT No. 77

The Astoria Light, Heat & Power Company

Fixed Capital Installed Prior to December 31, 1908

Retirements

Account	1919	1920	1921	1922	1923	Total
Real Estate	.....	.....	.....	.....	.....	.....
Plant	$6,250	.....	.....	$88,000	.....	$94,250
Piers & Bulkheads	.....	.....	.....	3,702	.....	3,702
Railroad Equipment	.....	.....	.....	.....	$3,633	3,633
Tools & Implements	855	$684	$547	439	350	2,875
Office Furniture & Fixtures	.....	.....	.....	.....	.....	.....
Horses, Wagons & Harness	.....	.....	940	.....	.....	940
Boats & Scows	.....	.....	.....	.....	.....	.....
Street Mains	.....	.....	.....	.....	.....	.....
Meters & Connections	.....	.....	.....	.....	.....	.....
Services	.....	.....	.....	.....	.....	.....
Interest on Cons. Expenditures	.....	.....	.....	.....	.....	.....
	$7,105	$684	$1,487	$92,141	$3,983	$105,400

DEFENDANTS' EXHIBIT No. 78

Astoria Gas Tunnel

Estimated Cost of Reproduction as of June, 1923

July 7, 1924

No.	Item	Unit quan.	Quantity	Unit price	Amount
1	Excav. in Shaft, Earth abv. MSL	Cu. Yd	792	$20.70	$16,394.40*
2	" " " " below "	"	2,240	27.90	62,496.00*
3	" " " Rock " "	"	18,635	25.24	470,347.40
4	" " Tun'l "	"	63,395	19.93	1,263,462.35
5	" " " Bad Ground	"	6,147	72.07	443,014.29
6	Concrete in Shaft	"	6,435	26.66	171,557.10
7	" " Tun'l Sound Ground	"	23,370	25.04	585,184.80
8	" " " Bad Ground	"	3,994	29.89	119,380.66
9	Stone Packing	"	1,000	4.50	4,500.00*
10	Grout in Shaft	Bbl.	300	6.30	1,890.00*
11	" " Tun'l Low Pressure	"	11,835	21.67	256,464.45
12	" " " High Pressure	"	17,360	21.67	376,191.20
13	Cast Steel Lin'g in Tun'l	Ton	1,365	169.16	230,903.40
14	Cast Iron " " "	"	228	133.16	30,360.48
15	Bolts	"	160	165.00	26,400.00=
16	Steel Sheet Piling	"	138	140.40	19,375.20*

*Adopted Prices in Plaintiff's Exhibit 836.
=Materials Only; Labor included in other Items.

Estimated Cost of Reproduction as of June, 1923—Cont'd

No.	Item	Unit quan.	Quantity	Unit price	Amount
17	Structural Steel	"	267	111.60	29,797.20*
18	Iron Castings	"	115	144.00	16,560.00*
19	Timbering (Diamond	M. B. M	43	65.00	2,795.00=
20	Test Holes in Tun'l Drill)	Lin. Ft	1,500	20.00	30,000.00
20A	" " " "	" "	43,300	15.26	660,758.00
21	Pumping Plant	Lump Sum			123,700.00
22	Pumping	M. G. F	324,000	.98	317,520.00
23	Preparing Site	Lump Sum			5,000.00*
24	Engineer's Office	" "			20,000.00*
25	Exploratory Borings	" "			45,000.00*
26	Concrete Cradle	Cu. Yd	200	29.89	5,978.00
					$5,335,029.93
		Engineering 7% =			373,452.07
					$5,708,482.00

*Adopted Prices in Plaintiff's Exhibit 836.
=Materials Only; Labor included in other Items.

[fol. 4449] Astoria Gas Tunnels

The cost of the reproduction of the Astoria Gas Tunnel is based upon the quantities given in Plaintiff's Exhibit No. 836. The information for making this estimate was obtained from a paper prepared by J. V. Davies and published in the Transactions of the American Society of Civil Engineers, Volume 80, December, 1916, and marked Defendant's Exhibit 21 and also from the testimony given by Mr. Davies before the Master.

The estimate submitted herewith provides for the total payments to be made to the contractor. Except upon Items 1, 2, 9, 10, 16, 17, 18, 23, 24 and 25, which are taken from Plaintiff's Exhibit No. 836, there is added to the unit costs of the other items 20% to provide for contractor's profit and contingencies. It also includes 7% as the cost of engineering required for preliminary investigation, design, surveys, and supervision during construction.

The estimate does not include the cost of the following items:

(a) Legal expenses.
(b) Administration expenses.
(c) Land and easements.
(d) Taxes.
(e) Permanent equipment of shafts and tunnels.
(f) Head Houses.
(g) Cost of money and interest during construction.

The estimated contract time is 3 years and 9 months.

[fol. 4450] DEFENDANTS' EXHIBIT No. 89

Consolidated Gas Company of New York

Repairs to Certain Buildings, as Shown on the Books of the Company for the Ten Months June 1, 1923, to March 31, 1924

Location of building	Amount
Works:	
11th Street Station	$41,640.73
21st Street Station	50,352.11
99th Street Station	10,335.94
14th Street Station (a)	2,778.63
42nd Street Station (a)	707.71
Miscellaneous:	
Kingsbridge Holder Station	632.06
West 132nd St. Station	21.55
East 111th St. Station	929.56
West 65th St. Station	3,273.32
East 63rd St. Station	189.48
West 44th St. Station	2,985.13
East 15th St. Station	679.90
General Office Building	34,652.51
West 159th St. shop	2,567.26
212 West 57th St. Office	4,134.33
2084 Third Ave. Office	5,595.34
Hester St. Office & Shop	4,204.65
Elizabeth St. Shop	2,386.64
111th St. Stable	2,586.35
66th St. Dept. & Shops	3,089.33
20th St. Stable	99.24
Central Garage—368 First Ave.	2,788.31
	$176,630.08

(Here follow Defendants' Exhibits Nos. 90, 91, 95, marked side folio pages 4451-4495, inc.)

(a) Not now in operation.

DEFENDANTS' EXHIBIT NO. 90.

CONSOLIDATED GAS CO. - NEW YORK.

MAINS LAID IN 1922

Table 233.
Sheet No. 1.

Folio No.	Location		SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	PIPE & SPECIALS	DIST. SUPP. & EXPENSES	CARTAGE	AUTO SUSP	OTHER ITEMS	TOTAL COST
1603	N. Side of 44" St. from 7' W.E.C. 2nd Ave. to 7' W.W.C. " "		6	Replace	4 C.I.	1/24-1/25	14	-	$ 44.85	$ 69.76	—	—	$ 3.00	$ 6.62	$ 124.23
1604 1605	S. Side of 78" St.) N. Side of 107" St.)					Dec. 1921									
1606	N. Side of 14" St. from 4' 3" E.E.C. Irving Pl. to 5' 7" E.W.C. 3rd Ave.	(a)	6 Mut.	Replace	4 C.I.	12/23/21-7/ 3/22	469	5	65.41	528.73	$10.82	$2.20	-	-	(a)607.16
1607	W. Side of 2nd Ave. from 9' S.N.C. 34" St. to 20' N.N.C.34" St.	(a)	6 Mut.	Replace	4 C.I.	12/29/21-1/ 4/22	45	-	162.21	110.29	—	—	8.60	8.13	(a)289.23
1608	S. Side of 50" St. from 52' E.E.C. Park Ave. 92' E.E.C. " "	(a)	6 Stand.	Replace	10 W.I.	1/ 4/22-1/ 9/22.	33	6	91.34	83.40	—	—	4.20	32.91	(a)211.85
1609	S. Side of 47" St. from 9' 1" N.S.C. 47" St. to 22' 6" W.W.C.Mad. Ave.	(a)	Mutual 4 valve	Conn. 4" Mut. to 6" Stand.	—	2/ 8/22	-	-	17.20	26.08	—	—	1.50	—	(a) 44.78
1610	N. Side of Clarkson Street from 4' E.E.C. West St. to 4' 3" S.N.C. Clarkson St.		4 valve	Original	—	1/ 6/22	-	-	8.19	34.59	—	—	1.40	1.77	45.95
1611	W. Side of 1st Ave. from 11' 8" N.S.C. 125"St. to 16' 9" N.S.C. 125"St.		6	Conn. 8" Stand. & 6" Conn.	—	1/14-1/19	16	2	77.59	75.13	—	—	4.50	21.78	179.00
1612	From 29' 3" E.E.C. Mad. Ave. to 6' 9" N.S.C. 59" St.	(a)	Stand. 6 valve	Original	—	-2/10-	-	-	22.09	31.61	—	—	3.00	—	56.70
1613	From 21" S.S.C. 59" St. to 14" W.E.C. Mad. Ave.		6 valve	Conn. 6" Con.&6"N.A.	—	-2/10-	-	-	22.84	30.13	—	—	3.00	—	55.97
1614	S. Side of 118" St. from 649' E.E.C. Pleasant Ave. to 4' 10" to 6' N.S.C. 118"St.		4	Conn. 6" Con. & 4" Stand.	—	1/19-1/21	4	2	49.38	40.76	—	—	4.50	9.01	103.65
1615	E. Side of 6" Avenue from 2' 6" N.S.C. 34" St. to 19' 0" S.S.C. 34" St.		6 con.	Replace	8 C.I.	1/25-1/28	24	11	110.44	50.30	—	7.70	—	93.23	(b)261.67

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

Table 233.
Sheet No. 2.

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	PIPE AND SPECIALS	DIST. SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST
1616	N. Side of 11th St. from 14' W.W.C. Hudson St. to 6' E. W. C. " "	6	Replace	4 C.I.	2/1-2/4	19	11	$98.93	$62.64	--	$3.30	$ 6.00	$ 67.21	$ 238.08
1617	W. Side of Worth St. from 1' 2" E.E.C. Bwy. to 25' E.E.C. Bwy.	6	Replace	4 C.I.	2/24-3/1	45	3	59.17	117.80	--	2.20	3.00	3.03	185.20
1618	S. Side of 60th St. from 34' E.E.C. 3rd Ave. to 20' W.W.C. 2nd Ave.	16	Replace	30 C.I.	3/6-4/7	583	7	2,647.08	4,060.14	$ 217.86	181.20	--	226.96	7,293.24
1619	S. Side of 79th Street, from 10' W.W.C. Ave. A., to 4' N.S.C. 79th St. 9' N.S.C. 79th St.	6	Conn. 6" C.I. to 6" C.I.	--	3/6-3/9	10	9	85.28	27.79	--	--	7.50	52.64	173.21
1620	N. Side of 71st St. from 4' E.W.C. 1st Ave. to 3' W.E.C. 2nd Ave.	6	Replace	4 C.I.	3/13-3/29	696	-	842.28	673.53	12.80	132.00	3.00	79.17	1,742.78
1621	E. Side of William Street, from 5' S.N.C. New Chambers St to 35' N.N.C. " " "	6 Mat	Replace	4 C.I.	3/6-3/10	43	-	65.61	58.56	2.40	6.60	3.00	--	136.37
1622	E. Side of William Street, from 7' S.N.C. New Chambers St. 35' N.N.C.	6	Replace	4 C.I.	3/9-3/16	62	7	98.67	101.21	6.00	7.70	4.50	65.00	283.08
1623	N. Side of Bleecker Street, from 14' W.W.C. 7th Ave. to 6 E.E.C. Grove St. (a)	6 Mat.	Replace	4 C.I.	3/9-3/21	224	5	308.33	206.57	5.33	11.00	18.00	--	(a)549.23
1624	76th St. at point 140' E.E.C.5"Ave. to 4' N.S.C. 76th Street 5' S.N.C. 76th Street (a)	6	Original	--	3/20-3/29	19	10	193.22	89.01	--	8.80	--	--	(a)291.03
1625	N. Side of 61" St. from 19' W.W.C. Lexington Ave. to 2' E.E.C. Park Avenue.	6	Replace	4 C.I.	3/29-4/8	430	-	591.62	447.96	4.27	52.80	--	32.80	1,129.45
1626	N. Side of 61" St. from 18' W.W.C. 3" Ave. to 19' E.E.C. Lexington Ave.	6	Replace	4 C.I.	4/7-4/25	424	6	631.75	389.85	4.27	44.00	--	39.35	1,109.32

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	COST MATERIAL PIPE AND SPECIALS	COST MATERIAL DIST. SUPP. & EXPENSES	COST MATERIAL CARTAGE	COST MATERIAL AUTO SUSP.	COST MATERIAL OTHER ITEMS	TOTAL COST
1627	N. Side of 69th St. from 6' E.E.C. West End Ave. to 6' 6" E.W.C.Amsterdam"	8	Replace	4 C.I.	4/1-4/26	842	3	$ 1,085.60	$1,099.42	$ 11.68	$ 176.00	—	$ 581.14	$ 2,953.84
1628	S. Side of 163rd Street from 6' E.W.C. Ft. Wash'n Pl. to 4' E.W.C. "	6	Original	—	3/22-8/9	286	2	741.25	384.06	4.05	28.00	} 26.40	96.70	1,280.46
1629	W. Side of Ft. Wash'n Place from 6' S.E.C. 161" St. to 6' S.E.C. 163" St.	6	Original	—	3/22-7/29	453	7	677.85	560.99	19.56	—	30.00	204.85	1,493.25
1630	S. Side of 29" St. from 111 W.W.C. Bwy to 119 W.W.C. " (a)	6 Mat.	Replace	4 C.I.	-3/28-	8	-	18.50	13.62	-.21	—	1.50	—	(a) 33.63
1631	S. Side of 36" St. from 145' W.W.C. 6th Ave. to 173' W.W.C. 6th Ave.(a)	6 N.A.	Replace	4 C.I.	4/17-4/18	30	-	41.02	40.23	—	8.80	—	-.30	(a) 90.35
1632	S. Side of 36" St. from 11' E.E.C. 5" Ave. to 5' N.S.C.36" St.	6	Original	—	Not Stated			(Cancelled - Charged to Repairs Mains)						47.97
1633	At 35' S.S.C. 115th St. to 8' W.E.C. 1st Ave. & E.E.C. 1" "	8	Connecting 20" Std. & 8" Con.	—	3/27-4/8	15	11	385.78	218.87	—	--	22.50	76.28	703.43
1634	W. Side of Tompkins St. from 3' N.E.C. 14" St. to 2' S.S.C. 15" St.	6	Replace	4 C.I.	3/30-4/4	259	-	4.60	239.84	--	4.40	—	—	248.84
1635	E. Side of 6" Ave. from 30' S.S.C. 115" St. to 38' S.S.C. 115" St.(a)	8 Stand.	Replace	6 W.I.	4/4-4/8	11	9	49.49	86.32	—	—	6.00	—	(a)141.81
1636	S. Side of Fairview Ave. from 22'6"W.W.C. Wadsworth Ter. to 58'6"W.W.C. "	8 "	Original	—	4/4-4/6	36	-	43.32	47.29	-.21	—	3.00	—	93.82

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	COST MATERIAL PIPE AND SPECIALS	COST MATERIAL DIST. SUPP. & EXPENSES	COST MATERIAL CARTAGE	COST MATERIAL AUTO SUPP.	COST MATERIAL OTHER ITEMS	TOTAL COST
1637	N. Side of 52" St. from 4' E.W.C. 1" Ave. to 44' W.E.C. 2" Ave.	6	Replace	4 C.I.	4/15-5/5	697	1	$1,218.18	$ 694.05	—	$ 70.40	—	$124.22	$2,106.85
1638	N. Side of 52" St. from 3' E.W.C. 3" Ave. to 29' E.E.C. Lex. Ave.	6	Replace	4 C.I.	5/2-5/16	430	-	919.00	432.93	—	70.40	—	17.90	1,440.23
1639	N. Side of 52" St. from 29' W.W.C. Lex. Ave. to 31' E.E.C. Park Ave. at 31' E.E.C. Park Ave. 4' S.E.C. to 5' N.S.C. 52"St. S.S. 52" St. from 31' to 32' E.E.C. Park Ave.	6	Replace	4 C.I.	4/28-5/11	409	-	945.14	472.46	—	88.00	—	2.52	1,508.12
1640	S. Side of Dey St. from 165' 6" E.E.C. G'wich St. to 172' 6" E.E.C. " "	6 Mat.	Replace	4 C.I.	4/12-4/15	10	9	72.46	28.39	—	3.30	$6.00	12.50	(a)122.65
1641	W. Side of Mangin St. from 94' N.E.C. Stanton St. to 98' N.E.C. " "	8	Replace	6 C.I.	-4/15-	4	8	9.90	37.76	—	—	—	24.14	(a) 71.80
1642	N. Side of 26" St. from 478' E.E.C. 1st Ave. to 530' E.E.C. " "	4	Replace	6 C.I.	4/22-4/23	58	-	51.58	68.08	$3.48	1.10	1.50	33.75	189.49
1643	N. Side of 76" St. from 10' W.W.C. Ave. A to 24' Do	8	Replace	4 C.I.	4/29-5/2	16	6	107.43	83.17	—	8.80	—	3.75	203.15
1644	S. Side of 76" St. from 4' E.W.C. 1" Ave. to 17' W.W.C. 1" Ave.	6	Original	—	4/29-5/2	18	-	31.45	42.78	—	8.80	—	42.90	125.93
1645	N. Side of 111" St. from at point 5' 3" E.E.C.Park Ave. to 5' 10" E.S.C. 111" St. 5' 9" E.S.C. 111"St. (a)	4 Stand valve	Conn. bet 4" Std.& 6" Con.	—	-5/1-	1	8	14.99	23.19	—	—	2.40	—	40.58
1646	E. Side of Ave. A from 4' S.E.C. 88" St. to 4' N.S.C. 93" St.	8	Replace	4 C.I.	5/3-5/28	1327	6	2,123.16	1,944.16	—	148.20	—	165.69	4,381.21

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

Table 233.
Sheet No. 5.

FOLIO No.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST PAYROLL LABOR	COST MATERIAL PIPE AND SPECIALS	COST MATERIAL DIST. SUPP. & EXPENSES	COST MATERIAL CARTAGE	COST MATERIAL AUTO SUSP.	COST MATERIAL OTHER ITEMS	TOTAL COST
1647	N. Side of 84th St. from 7' W.W.C. Ave. A to 9' 6" W.E.C." "	6	Replace	4 C.I.	5/26-5/31	59	6	$118.25	$ 55.18	—	$4.40	—	$10.55	$188.38
1648	— Cancelled —													
1649	S. Side of 86th St. from 7' E.W.C. Ave. A to 9' 6" W.E.C." "	6	Replace	4 C.I.	5/25-5/31	66	5	221.66	107.01	—	5.50	—	--	334.17
1650	N. Side of 86th St. from 3' E.W.C. Ave. A to 30' E.E.C. " "	6	Replace	4 C.I.	5/24-5/27	43	-	158.96	52.67	—	3.30	—	1.20	236.13
1651	N. Side of 89th St. from 4' E.W.C. Ave. A to30' W.W.C. " "	6	Original	—	5/22-5/23	24	-	44.73	27.72	—	2.20	—	-.72	75.37
1652	N. Side of 92nd St. from 3' E.W.C. Ave. A to 3' W.E.C. " "	6	Replace	3 C.I.	5/9-5/12	35	-	112.87	87.91	—	3.30	—	1.20	204.98
1653	E. Side of Morton Ave. from 3' S.S.C. Bleecker St. to 4' 6" W.E.C. Morton St.(a)	6 Mut. Valve	Original	—	-5/5-	—	-	2.74	26.04	—	2.20	—	—	(a)30.98
1654	N. Side of Bleecker St. from 92' 6" E.E.C. 7th Ave. to 5' 0" S.E.C. Bleecker St.(a)	4 Mut. Valve	Original	—	-5/5-	—	-	2.74	13.40	.12	1.10	—	—	(a)17.36
1655	N. Side of 80th St. from 4' E.W.C. Madison Ave. to 5' W.E.C. " "	6	Replace	4 C.I.	6/3-6/7	32	4	118.89	61.31	—	6.60	--	2.55	191.55
1656	E. Side of 80th St. from 6' W.E.C. 2nd Ave. to 8' E.E.C. " "	6	Replace	4 C.I.	5/5-5/10	13	6	89.61	24.61	—	4.40	$7.20	54.05	179.87
1657	. Side of Orchard St. from 9' N.S.C. Division St. to 15' N.N.C. " " (a)	6 Mut.	Replace	4 C.I.	5/19-6/2	35	10	247.05	163.38	—	3.30	10.80	9.39	(a)413.92

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	PIPE & SPECIALS	DIST. SUPP.& EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST
1658	N. Side of Christopher St. from 14' W.E.C. Bleecker St. to 30' W.W.C. " " (a)	6 Mut.	Replace	4 C.I.	5/15-5/18	61	9	$ 82.49	$123.71	—	$ 2.20	$1.20	—	(a) $209.60
1659	N. Side of 91" St. from 6' W.E.C. to 30' E.E.C.	6	Replace	4 C.I.	5/17-5/5	26	-	52.57	29.08	—	2.20	--	—	83.82
1660	N. Side of 90" St. from 6' W.E.C. Ave. A to 30' E.E.C. " "	6	Replace	4 C.I.	5/18-5/19	26	-	51.68	29.37	—	3.30	—	.60	84.95
1661	N. Side of Canal St. from 100' E.E.C. Ludlow St. to 120' E.E.C. " "	6	Replace	3 C.I.	5/19-5/22	20	-	59.94	19.67	—	2.20	3.60	.75	86.16
1662	S. Side of 213" St. from 15' E.W.C. 9" Ave. to 115' E.E.C. " "	6	Original	—	5/22-5/26	142	6	113.42	191.06	—	—	4.80	2.88	312.16
1663	S. Side of 17" St. from 4' W.E.C. 5" Ave. to 16' E.E.C. " " (a)	6 Stand.	Original	—	5/15-6/20	20	-	119.25	101.84	—	17.60	—	--	(a) 238.69
1664	S. Side of 38" St. from 5' E.E.C. Lexington Ave. to 18' E.W.C. " " (a)	6 Mut.	Replace	4 C.I.	5/25-5/27	24	-	81.48	86.18	$24.28	--	4.80	—	(a) 196.74
1665	N. Side of 69" St. from 25' E.E.C. 5" Ave. to 6' N.S.C. 69" St. 4' S.N.C. 69" St.	6	Original	—	6/5-6/7	16	-	49.48	49.82	—	—	2.40	—	101.70
1666	N. Side of 83" St. from 8' W.W.C. to 37'	6	Replace	4 C.I.	5/31-6/2	48	-	108.35	120.73	—	8.80	—	6.72	244.60
1667	S. Side of 65" St. from 156' W.W.C. Central Park W. to 10' N.S.C. " " (a)	6 N.A.	Conn.24" Std. to 6" N.A.	—	5/31-6/7	7	9	99.90	62.64	—	6.60	1.20	—	(a)170.34
1668	N. Side of 84" St. from 5' E.W.C. Madison Ave. to 8' W.W.C. " "	6	Replace	4 C.I.	6/2-6/3	13	-	43.60	17.14	—	3.30	—	—	64.04

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST PAYROLL LABOR	COST MATERIAL PIPE & SPECIALS	COST MATERIAL DIST. SUPP. & EXPENSES	COST MATERIAL CARTAGE	COST MATERIAL AUTO SUSP.	COST MATERIAL OTHER ITEMS	TOTAL COST
1669	N. Side of 84" St. from 5' W.E.C. Madison Ave. to 5' E.E.C. " "	6	Replace	4 C.I.	-6/5-	7	9	$ 47.15	$ 18.28	$ 1.70	$ 4.40	--	--	$ 71.53
1670	N. Side of 113" St. from 12' W.W.C. St. Nich. Ave. to 15' E.E.C. 7th Ave.	6	Replace	4 C.I.	6/5-6/12	347	10	447.67	417.39	9.87	--	$10.80	--	885.73
1671	S. Side of West 65" St. from S.C. Line 65" St. to 10' W.E.C. Columbus Ave.	6	Con. 6" Con. to 6" N.A.	--	6/5-6/9	6	-	79.19	32.54	--	4.40	--	$103.43	219.56
1672	S. Side of 71" St. from 15' 6" W.W.C. Central Pk.W. to 4' E.W.C. " " (a)	6 N.A.	Original	--	6/23-6/28	--	-	115.23	66.87	8.00	17.60	--	--	(a)207.70
1673	E. Side of 1st Ave. from 1' 5" N.S.C. 14" St. to 77' S.S.C. " "	6	Replace	4	6/20-6/23	67	10	16.50	69.64	11.97	--	--	46.61	(d)144.72
1674	W. Side of 3rd Ave. from 3' E.W.C. 3rd Ave. to 4' S. S.C. 14" St.(a)	10 Std. Valve	Conn. 6" Con. to 10" Stand.	--	-6/14-	--	-	-	49.20	--	--	--	--	49.20
1675	N. Side of 106" St. from 10" E.W.C 2nd Ave. to 7' E.E.C. " "	6	Replace	4 C.I.	6/20-7/12	76	8	477.25	176.29	9.65	--	14.85	1.20	679.24
1676	N. Side of James Slip from 5' E.W.C. South St. to 20' W.W.C. " "	6	Replace	4 C.I.	6/22-6/24	20	7	66.86	65.55	1.80	1.10	1.20	--	136.51
1677	N. Side of 10" St. from 5' W.E.C. 5" Ave. to 25' E.E.C. " "	6	Replace	4 C.I.	6/26-6/28	15	-	44.99	20.79	--	--	3.60	--	(a)69.38
1678	N. Side of 76" St. from 31' W.W.C. Madison Ave. to 33' E.E.C. 5th Ave.	4	Replace	4 C.I.	6/5-6/17	407	-	624.25	301.96	--	88.00	--	--	1,014.21
1679	E. Side of Montgomery St. from 5' W.E.C. Front St. to 8' E.W.C. South St.	8	Replace	4 C.I.	7/6-	205	3	512.74	436.02	18.00	15.40	8.40	--	990.56

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL: PAYROLL LABOR	PIPE & SPECIALS	DIST. SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST
1680	S. Side of W. 71st St., from 6' W.E.C. Columbus Ave. to South Curb 71st St.	12 C.I. valve	Original	--	7/18-7/24	3	9	$103.31	$172.98	$ 4.72	--	$ 1.20	--	$ 282.21
1681	N. Side of 61st St., from 4' W.E.C. Madison Ave. to 19 E.E.C. Madison Ave.	6	Replace	4 C.I.	7/21-7/24	25	6	77.47	65.16	--	--	3.60	$ 87.07	233.30
1682	N. Side of 66th St., from 4' W.E.C. Madison Ave. to 19' E.E.C. Madison Ave.	6	Replace	4 C.I.	8/12-8/21	17	6	120.97	53.44	--	$26.40	--	--	200.81
1683	E. Side of Madison Ave. from 6' N.S.C. 64th St., to 15' N.N.C. 64th St., (a)	16 Stand	Original	--	7/25-8/4	44	-	110.64	95.35	--	17.50	--	36.78 (a)	260.37
1684	(Cancelled)					(Cancelled)								
1685	N. Side of 68th St., from 4' W.E.C. Madison Ave. to 19' E.E.C. Madison Ave.	6	Replace	4 C.I.	8/24-8/26	23	6	76.37	86.42	1.70	13.20	--	13.76	191.45
1686	(Cancelled)					(Cancelled)								
1687	E. Side of 1st Ave., from 74' S.S.C. 26th St., to 15' W.E.C. 1st Ave.	30 Valve	Original	--	7/17-7/24	-	--	191.56	686.56	23.42	6.60	7.20	78.75	993.11
1688	E. Side of 5th Ave., from 18' S.N.C. 72nd St., to North Curb Line 72nd St.	8	Replace	10 C.I.	7/21-7/22	19	6	167.46	101.46	8.82	--	9.60	--	287.34
1689	S. Side of 23d St., from 6' W.E.C. 1st Ave. to 10' E.E.C. 1st Ave.	6	Replace	4 C.I.	7/24-7/25	14	10	34.36	102.33	1.70	1.10	2.40	48.75	190.64
1690	N. Side of Thomas St. from West Curb Line Trinity Place to 40' West Curb Line Trinity Pl.	6	Replace	3 W.I.	7/25-7/27	42	11	95.07	111.62	8.50	4.40	3.60	--	223.19
1691	S. Side of 34th St., from 8' E.E.C. 9th Ave. to 100' E.E.C. 9th Ave.	6	Replace	4 C.I.	7/29-8/7	76	3	125.78	104.37	--	5.50	1.20	--	236.85

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST: PAYROLL LABOR	COST: MATERIAL: PIPE AND SPECIALS	COST: MATERIAL: DIST.SUPP. & EXPENSES	COST: MATERIAL: CARTAGE	COST: MATERIAL: AUTO SUSP.	COST: MATERIAL: OTHER ITEMS	TOTAL COST.
1692	N. Side of 65th St., from East Curb Madison Ave. to W.W.C. Madison Ave.	16	Replace	20 C.I.	8/12-8/29	63	6	$ 704.61	$ 630.52	$ 72.23	$13.20	--	--	$1,420.66
1693	S. Side of 34th St., from 14' E.W.C. 8th Ave. to 50'1" W.W.C. 8th Ave.	6	Replace	4 C.I.	8/8-8/30	64	2	472.03	240.44	20.49	11.00	$14.40	$131.25	889.61
1694	S. Side of 60th St., from 30' W.W.C. 2nd Ave. to 8' W.E.C. 2nd Ave. E. Side 2nd Ave. from 8' N.S.C. 60th St., to 20' N.E.C. 60th St.	16	Replace	30 C.I.	8/14-9/16	155	3	769.09	1,174.52	--	47.20	14.10	313.50	2,316.41
1695	N. Side of 60th St., from 9' W.E.C. 2nd Ave., to 20' E.E.C. 2nd Ave.	6	Replace	4 W.I.	9/13-9/25	24	-	308.46	38.40	8.28	--	14.40	140.89	510.43
1696	W. Side of Front St., from 6' N.W.C. Gouverneur Lane to 6' S.W.C. Gouverneur Lane and thence from 15' W.W.C. Front St. to 8'E.W.C.FrontSt. on N.S. Gouv. Pl.	6	Replace	4 C.I.	8/13-8/16	40	4	114.17	104.71	8.66	3.50	3.60	-- (f)	234.44
1697	N. Side of 98th St., from 4' W.E.C. Columbus Ave. to 34' E.E.C. Columbus Ave.	6	Replace	4 C.I.	8/22-8/25	35	-	89.18	55.49	.36	--	5.40	42.64	193.07
1698	S. Side of 148th St., (Cancelled)				(Cancelled)									
1699	N. Side of Ann St., from 7' W.E.C. Nassau St., to 12' E.E.C. Nassau St., (a)	6 Mut.	Replace	4	- 8/20 -	19	6	19.61	47.09	4.07	2.20	--	--	72.97
1700	From S.E.C. 133d St & Lincoln Ave. 1 Beam Paving Supports over 48" Main.	48	Original	--	8/15-8/28	--	--	--	--	--	--	--	1,547.87	1,547.87
1701	S. Side of 173rd St., From 6' W.E.C. Haven Ave. to 4' E.W.C. Ft. Wash. Ave.	8	Original	--	8/25/22 - 5/2/23	660	7	1,832.24	1,085.41	7.73	14.00	51.90	147.30	3,138.58

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL: PAYROLL LABOR	PIPE & SPECIALS	DIST.SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST
1702	N. Side of 51st St., from 11½ W.E.C. Madison Ave. to 73' W.W.C. Park Ave.	6	Replace	4 C.I.	8/30-9/27	344	8	$ 657.34	$ 968.03	$ 73.20	$ 44.00	—	$17.03	$1,759.60
1703	S. Side of 51st St., from 12' E.W.C. Madison Ave. and 6' N.S.C. to 6' N.S.C. 51st.	6	Original	—	9/8-9/26	429	6	1,282.50	1,708.78	126.39	44.00	--	194.48	3,356.15
1704	N. Side of Charlton St., from 7' W.E.C. West St., to 21' E.E.C. West St.,	6	Replace	4 C.I.	- 9/5 -	26	4	26.25	77.63	--	--	.60	1.20	105.68
1705	From 29'2" S.S. 93d St., to 8'10" W.E.C. Columbus Ave.	12 Valve	Conn. 12" Con. to 20" N.A.	--	9/7-9/15	8	2	129.87	216.05	--	--	9.90	49.20	405.02
1706	S. Side of Stone St., from 6' E.W.C. Broad St., to 15' W.W.C. Broad St.	6	Replace	4 C.I.	9/15-9/22	21	4	43.31	39.87	1.80	—	.60	32.65	118.23
1707	N. Side of 157th St., from 12'2" W.E.C. Amsterdam Av. to 3'7" E.W.C. Amsterdam Ave.	6	Replace	4 C.I.	7/14-7/16	46	5	212.20	96.81	--	--	--	8.40	317.41
1708	N. Side of 78th St., from 4' W.E.C. Park Ave. to 22' E.E.C. Park Ave.	6	Replace	4 C.I.	9/29-4/3	34	_	113.64	68.51	--	6.60	--	59.86	248.61
1709	N. Side of 78th St., from 4' W.E.C. Madison Ave. to 4' E.W.C. Madison Ave.	6	Replace	4 C.I.	10/3-10/11	62	6	197.27	120.52	--	26.40	--	153.64	497.83
1710	N. Side of 105th St., from 2'9" W.E.C. Columbus Ave. to 12'2" E.E.C. Columbus Ave.	6	Replace	4 C.I.	-9/22-	10	4	13.17	16.75	--	--	1.20	--	31.12
1711	N. Side of 78th St.				(Cancelled)									
1712	S. Side of 78th St.				(Cancelled)									
1713	At Point 13' E.E.C. Park Ave. to 3' N.S.C. 104th St. 6' N.S.C. 104th St. (a)	4 STD.	Con. 6" Std. to 6" Con.	—	10/5-10/11	5	10	59.72	49.18	--	--	3.60	-- (a)	112.50

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1922

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST PAYROLL LABOR	COST MATERIAL PIPE & SPECIALS	COST MATERIAL DIST. SUPP. & EXPENSES.	COST MATERIAL CARTAGE	COST AUTO SUSP.	COST OTHER ITEMS		COST TOTAL COST
1714	W. Side of Park Ave. from 2' S.N.C. 121st St. to 19' S.N.C. 121st St. thence on S.S. 121st St. from 3' to 6' E.W.C. Park Ave.	6	Conn. 6" and 8" Con.	--	10/13-10/18	17	10	$ 64.75	$ 43.93	--	--	$ 3.60	$ 46.50		$ 158.78
1715	S. Side of 192nd St. from 18' W.W.C. St. Nicholas Ave. to 6' W.E.C. Wadsworth Ave.	6	Original	--	10/25-11/3	253	6	545.56	290.90	$ 7.20	--	12.00	102.31		957.97
1716	N. Side of 51st St. from 4'0" W.E.C. Beekman Place to 105' 0" E.E.C. Beek. Place	4	Original	--	10/28-11/1	77	6	116.45	98.07	1.61	$17.60	6.00	--		239.73
1717	N. Side of King St. from 11' W.E.C. West St. to 20' E.E.C. West St.	6	Replace	4 C.I.	10/26-11/1	24	6	66.13	121.27	1.20	3.30	--	--		191.90
1718	West side of Suffolk St. from 12' S.S.C. Grand St. to 7' N.S.C. Grand St. and from 5½" S.N.C. Grand St. to 198' 0" N.N.C. Broome St.	6	Replace	4 C.I.	11/9-11/29	39 530	2 W.I. 2 C.I.	888.26	701.81	47.59	26.00	12.00	164.10		1,839.76
1719	West Side of Sniffen Court from 4' N.S.C. 36" St. to 72' S.S.C. 36" St. (a)	4 Std.	Original	--	11/20-12/20	63	10	109.72	90.35	5.52	--	10.50	17.63	(a)	233.72
1720	W. Side of Attorney St. from 5' 0" N.S.C. Broome St. to 25' 0" S.S.C. Broome St.	6	Replace	4 C.I.	11/28-12/4	15	9	94.83	78.21	14.81	2.20	2.40	--	(g)	192.45
1721	E. Side of Greene St. from 65' 6" N.N.C. W.Houston St. to 125' 0" N.N.C. W. Houston.	6	Replace	4 C.I.	11/27-12/2	38	3	103.39	135.51	14.31	--	3.60	--	(h)	256.81
1722	At Point 116' 6" W.W.C. 5th Ave. 6' S.N.C. 141st St. 24' S.N.C. 141st St.	6	Reconnecting disused mains		12/7-12/13	16	5	34.96	40.23	1.20	--	4.50	--		80.89
1723	S. Side of Stone St. from 5' 10" W.W.C. Broad St. to 3' E.E.C. Broad St. (a)	8	Replace	6 C.I.	12/20-12/21	7	0	10.58	35.63	--	--	1.20	--	(a)	47.61

(a) Charged to Sundry Debtors
(b) Of this amount, $45.64 was charged to Sundry Debtors
(c) Of this amount, $61.02 was charged to Sundry Debtors
(d) Of this amount, $94.94 was charged to Sundry Debtors
(e) Of this amount, $66.55 was charged to Sundry Debtors
(f) Of this amount, $214.27 was charged to Sundry Debtors
(g) Of this amount, $159.81 was charged to Sundry Debtors
(h) Of this amount, $204.27 was charged to Sundry Debtors.

4471+
4472

DEFENDANTS' EXHIBIT No. 91.

Table 232.
Sheet No. 1.

CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

POLIC NO.	LOCATION		SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED (INCHES)	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	PIPE & SPECIALS	DIST.SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS		TOTAL COST.
1724	N. Side of Clarkson St. from 5' W.E.C. West St. to 4' W.E.C. Greenwich St.		6	Replace	4 C.I.	12/22/22-1/23/23	537	2	$ 954.92	$656.08	$ 32.37	---	$27.60	---		$ 1,672.97
1725	S. Side of 44th St., from 10' E.E.C. Bway, to 8' W.S.C. 44th St.	(a)	4 Std.	Conn.4" N.A. & 6" Std.	---	12/29/22-1/5/23	10	1	93.49	23.25	16.00	---	9.00	---	(a)	141.74
1726	N. Side of 26th St. from 20' 9" W.W.C. 1st Ave., to 2' 0" S.N.C. 26th St.		6 Valve	Original	---	1/15-1/16	--	--	39.09	44.14	1.86	---	2.40	---		87.49
1727	N. Side of 26th St., from 30' 9" E.E.C. 2d. Ave., to 4' 0" W.N.C. 26th St.		6 Valve	Original	---	- 1/17 -	--	--	19.55	43.28	1.35	---	1.20	---		65.38
1728	W. Side of Washington St., from 9' 0" N.S.C. Spring St., to 5' 0" E. W. C. Wash. St.,		12 Valve	Original	---	1/16-1/19	--	--	86.42	113.70	1.14	---	4.80	---	(b)	206.06
1729	W. Side of Washington St., from 11' 6" N. S. C. Spring St., to 5' 9" S. W. C. Wash. St.		4 Valve	Original	---	1/15-1/20	--	--	32.16	27.47	1.14	---	2.40	---	(b)	93.17
1730	N. Side of 134th St., from 9' 0" E. W. C. Madison Ave., to 20' 0" W.W.C. Madison Ave.		6	Replace	4 C.I.	1/22-2/1	30	3	141.98	72.52	.53	---	10.50	$ 57.28		282.81
1731	E. Side of West St., from 25' S. S. C. Spring St., to 5' 0" W.E.C. West St.,		12 Valve	Original	---	1/25-1/30	--	--	58.21	89.95	1.14	---	3.60	---	(b)	152.90
1732	E. Side of West St., from 25' S.S.C. Spring St., to 15' W.E.C. West St.,		10 Valve	Original	---	1/24-1/27	--	--	98.97	87.55	1.14	---	3.60	---	(b)	191.26
1733	E. Side of West St., from 25' S.S.C. Spring St., to 11' W. E. C. West St.,		8 Valve	Original	---	1/22-1/30	--	--	64.70	66.18	1.14	---	2.40	---	(b)	134.42
1734	West Side of Washington St., from 7'6" S.N.C. Spring St., to 6'0" S.W.C. Wash. St.,		10	Original	---	1/31-2/2	Not Stated		57.19	79.86	1.14	---	3.60	---	(b)	141.79

4473 +
4474

CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION		SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST: PAYROLL LABOR	COST: MATERIAL: PIPE AND SPECIALS	COST: MATERIAL: DIST. SUPP. & EXPENSES	COST: MATERIAL: CARTAGE	COST: MATERIAL: AUTO SUSP.	COST: MATERIAL: OTHER ITEMS		TOTAL COST
1735	S. Side of Lenox Ave., from 30' N.N.C. 110th St., to 24' S.S.C. 110th St.	(a)	6 Std.	Conn.6" Std. & 20" Conn.	--	3/19-3/27	59	10	$207.57	$ 165.74	$ 2.01	--	$ 6.00	--	(a)	$ 381.32
1736	N. Side of 111th St., from 19' E.E.C. Lenox Ave., to 13' W.E.C. Lenox Ave.		6	Not Stated	Not Stated	3/21-3/26	38	8	106.28	76.11	3.86	--	2.40	$18.20		206.85
1737	N. Side of 112th St., from 13' W.E.C. Lenox Ave. to 18' E.E.C. Lenox Ave.		6	Original	--	3/22-3/30	29	11	130.02	110.09	3.48	--	2.40	10.73		256.72
1738	N. Side of 114th St., from 13' W.E.C. Lenox Ave. to 18' E.E.C. Lenox Ave.		6	Original	--	3/22-4/7	26	3	119.18	84.09	3.78	--	3.60	10.08		220.73
1739	N. Side of 115th St., from 13' W.E.C. Lenox Ave. to 18' E.E.C. Lenox Ave.		6	Original	--	3/29-4/3	42	4	120.08	75.75	2.01	--	2.40	10.40		210.64
1740	E. Side of Clarkson St., from 8' W.E.C. West St., to 30' E.E.C. West St.		6	Replace	4 C.I.	4/3-4/4	36.	7	69.20	65.12	10.83	--	1.20	---		146.35
1741	E. Side of West St.		8	Replace	10 C.I.	- 4/7 -	49	8	35.25	197.72	18.33	--	1.20	---		252.50
1742	S. Side of 114th St., from 4' W.E.C. Manhattan Ave., to 13' E.E.C. Manhattan Ave.,	(a)	6 N.A.	Conn. 6" N.A. & 6" Conn.	--	4/9-4/14	14	11	96.42	101.46	7.17	--	3.60	---	(a)	208.65
1743	N. Side of 115th St., from 13' W.W.C. Pleasant Ave., to 8' E.W.C. Pleasant Ave.,		6	Replace	4 C.I.	4/5-4/11	16	9	120.58	65.71	12.26	--	7.20	61.48		267.23
1744	From 9' to 13'6" N.S.C. 44th St., thence to 3' E.W.C. 1st Ave.,	(a)	20 N.A.	Original	---	Not Stated	Not Stated		269.21	451.44	6.75	$76.80	---	---	(a)	804.20
1745	From 9' to 22' N.S.C. 44th St., thence East to 5' W.E.C. 1st Ave.	(a)	24 N.A. Valve	Original	---	4/11-4/23	--	--	130.73	179.25	---	17.60	---	---	(a)	327.58

4475 +
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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST						
								PAYROLL LABOR	MATERIAL PIPE AND SPECIALS	MATERIAL DIST. SUPP. & EXPENSES	MATERIAL CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST
1746	S. Side of Stone St., from 150' W.W.C. Broad St., to 186' W.W.C. Broad St.	6	Replace	4 C. I.	4/8-4/29	61	2	$150.84	$121.36	—	--	$ 7.20	-- (c)	$279.40
1747	E. Side of 2nd Ave., from 9' N.S.C. 44th St., to 18' N. S.C. 44th St., thence to 12' W.E.C. 2nd Ave., (a)	16 N.A.	Conn.16" N.A. to 20" N.A.	--	4/13-4/26	18	1	434.41	401.63	$ 27.00	$26.40	--	-- (a)	889.44
1748	N. Side of 71st St., from 10' E.W.C. 1st Ave., to 17' E.W.C. 1st Ave. thence to 6' N.N.C. 71st St., and 10' E.W.C. 1st Ave., (a)	20 Stand	Conn.36" N.A. to 20" Stand	--	4/24-5/3	17	--	502.33	559.63	9.92	63.20	--	-- (a)	1,135.08
1749	S.Side of 44th St., from 10' W.E.C. 3d Ave., to 15'6" W.E.C. 3rd Ave., thence North to 9' N.S.C. 44th St. (a)	12 N.A.	Conn. 12" N.A. to 20" N.A.	--	4/27-5/23	18	3	771.44	254.03	2.50	91.70	--	-- (a)	1,119.27
1750	W. Side of Lexington Ave., from 10' N.S.C. 49th St., to 19' N.S.C. 49th St., Thence East to 13' E.W.C. Lex.Ave. (a)	16 N.A.	Conn. 16" N.A. to 20" N.A.	--	Apr.-Nov.	14	5	542.05	483.53	20.15	13.20	18.46	19.77(a)	1,097.16
1751	E. Side of Lexington Ave., from 16' 6" S.S.C. 46th St., to 18' 2" S.S.C. 46th St., thence west to 16' 6" W.E.C.Lex.Av.(a)	16 N.A.	Conn. 16" N.A. to 20" N.A.	--	4/24-11/7	20	.6	638.72	681.48	51.77	22.00	1.20	-- (a)	1,395.17
1752	W. Side of 2nd Ave., from 9' N.S.C. 44th St., to 18' N.S.C. 44th St., thence west to 7' E.W.C. 2nd Ave. (a)	20 N.A.	Conn. 20" N.A. to 20" Conn.	--	4/25-5/15	14	1	1,007.25	635.37	9.04	66.00	---	-- (a)	1,717.66
1753	N. Side of 81st St., from 4' W.E.C. Amsterdam Ave., to 20' E.E.C. Amsterdam Ave.	6	Replace	4 C.I.	4/16-4/18	17	2	44.12	29.48	--	3.30	--	--	76.90
1754	N. Side of 82nd St. from 4' W.E.C. Amsterdam Ave. to 20' E.E.C. Amsterdam Ave.	6	Replace	4 C.I.	4/19-4/20	9	-	39.53	19.33	--	8.80	--	--	67.66

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

POLIC NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST						
									MATERIAL					
								PAYROLL LABOR	PIPE AND XPECIALS	DIST. SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST
1755	N. Side of 116th St., from 7' E.W.C. 1st Ave. to West Curb of Pleasant Ave.; thence North on W.S.Pleasant Ave. from 116th St. to 117th St.,N.S; thence to 660' E.W.C. Pleasant Ave.	12	Not Stated	Not Stated	4/18-5/23	1642	2	$4,272.01	$4,837.65	$221.41	--	$ 159.90	$2,703.71	$12,194.68
1756	S. Side of Jay St., from 7' 10" W.E.C. West St., to 0' 6" E.E.C. West St.	6	Replace	4 C.I.	- 4/22-	3	10	27.30	46.50	--	--	1.20	--	75.00
1757	S. Side of Harrison St., from 7' 11" W.E.C. West St., to 4' 6" E.E.C. West St.	6	Replace	4 C.I.	- 4/22-	6	11	14.96	15.13	--	--	1.20	--	31.29
1758	E. Side of Bedford St., from 5' S.E.C. Carmine St., to 12' N.E.C. Carmine St.	6	Replace	4 C.I.	- 4/25-	13	8	7.37	33.46	7.63	--	--	--	48.46
1759	S. Side of Franklin St., from 3' W.E.C. West St., to 7' 10" W.E.C. West St.	6	Replace	4 C.I.	- 4/26-	4	10	2.67	5.49	--	--	--	--	8.16
1760	S. Side of North Moore St., from 5' W.E.C. West St., to 8' W.E.C. West St.	6	Replace	4 C. I.	- 4/29-	2	3	4.67	8.46	--	--	1.20	--	14.33
1761	West Side of Bedford St., from 15' S.S.C. Carmine St., to 6' N.S.C. Carmine St.,	6	Replace	4 C. I.	- 5/1-	14	8	22.49	32.78	--	--	1.20	--	56.47
1762	W. Side of Bedford St., from 8' S.S.C. Carmine St., to 19' S.S.C. Carmine St.,	6	Replace	4 C. I.	- 5/2-	3	--	9.77	34.64	--	--	--	--	44.41
1763	S. Side of 71st St., from 13' E.W.C. 2nd Ave., to 5' 10" W.E.C. 2nd Ave.,	12	Original	--	5/4-5/16	40	4	632.52	451.84	12.75	75.90	--	93.28	1,266.29
1764	S. Side of 133rd St., from 8' 0" W.W.C. Amsterdam Ave., to 14' 0" W. W. C. Amsterdam Ave.	16	Original	--	5/9-5/10	6	6	40.27	578.28	23.28	53.90	1.50	--	697.23
1765	N.Side of 86th St., from 5' W.E.C.Av."A" to 19' 9" EEC.Av."A"	6	Replace	4 C. I.	5/7-5/8	24	9	29.98	31.14	--	3.30	--	--	64.42

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (Inches)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST						
								PAYROLL LABOR	MATERIAL: PIPE AND SPECIALS	MATERIAL: DIST. SUPP & EXPENSES	MATERIAL: CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST.
1766	N. Side of 26th St., from 12' E.E.C. Madison Ave., to 6' E.W.C. Madison Ave.	6	Replace	4 C.I.	5/7-5/9	48	6	$ 69.28	$ 136.43	$ 6.27	--	$ 3.60	--	$ 215.58
1767	S. Side of Chambers St., from 7' 1" W.E.C. West St., to 17' 9" E.E.C. West St.	6	Replace	4 C.I.	5-11	24	3	43.68	42.47	--	--	1.20	--	87.35
1768	S. Side of 190th St., from 6' W.E.C. Bennett Ave. to 8' E.W.C. Broadway	6	Original	--	5/12-5/23	248	--	342.14	329.57	3.00	--	12.00	$ 20.70	707.41
1769	E. Side of Bennett Ave., from 18' S.S.C. 190th St., to 72' N.N.C. 190th St.,	8	Original	--	5/10-5/26	124	6	207.24	190.39	1.20	--	12.00	--	410.83
1770	S. Side of Reade St., from 8' 6" W.E.C. West St., to 1' 0" E.E.C. West St.,	6	Replace	4 C.I.	5-14	6	6	55.73	77.66	--	--	1.20	--	134.59
1771	S. Side of 71st St., from 4' E.W.C. 1st Ave., to 8' E.W.C. 1st Ave., (a)	6 N.A.	Conn.6" N.A. to 6" Conn.	--	5/14-5/17	2	6	82.42	38.49	1.00	$ 3.30	--	-- (a)	125.21
1772	From 5' N.N.C. 71st St., to 11' E.W.C. 3rd Ave.,	16 Valve	Conn. 16" Conn. to 36" N.A.	--	5/17-5/25	26	--	397.03	364.27	13.96	56.10	--	73.78	905.14
1773	S. Side of 64th St., from 14' E.W.C. 3rd Ave., to 7' W.E.C. 3rd Ave.,	12	Original	--	5/25-6/5	40	3	515.01	482.00	21.54	39.60	--	94.90	1,153.05
1774	S. Side of Laight St., from 9' 2" W.E.C. West St., to 21' 0" W.E.C. West St.,	6	Replace	4 C.I.	5/22-5/23	30	2	64.40	66.90	--	--	1.20	--	132.50
1775	S. Side of Hubert St., from 8' 9" W.E.C. West St., to 18' 7" E.E.C. West St.,	6	Replace	4 C.I.	5/23-5/24	27	4	63.39	37.96	--	--	1.20	26.00	128.55
1776	E. Side of 9th Ave., from 9' N.S.C. 46th St., to South Curb Line 46th St., thence West to 14' W.E.C. 9th Ave.	12	Original	--	6/4-6/13	20	11	374.27	236.08	4.66	39.60	--	128.33	782.94

CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST: PAYROLL LABOR	COST: MATERIAL: PIPE AND SPECIALS	COST: MATERIAL: DIST. SUPP. & EXPENSES.	COST: MATERIAL: CARTAGE	COST: AUTO SUSP.	COST: OTHER ITEMS		TOTAL COST.
1777	W. Side of Jacob St., from 4' S.N.C. Frankfort St., to 19' S.S.C. Frankfort St.,	6	Replace	4 C.I.	5/24-6/5	25	6	$ 240.08	$ 163.99	$ 23.91	--	$13.20	$ 99.78		$ 540.96
1778	S. Side of 46th St., from 5' E.W.C. 10th Ave., to 15' E.W.C. 10th Ave. (a)	24 N.A.	Original	--	6/13-7/27	14	5	1,189.27	891.50	12.04	$99.90	32.63	--	(a)	2,225.34
1779	S. Side of 46th St. from 17' 6" W.E.C. 10th Ave. to 20' 0" W.E.C. 10th Ave. thence North to 10' N.S.C.46thSt.(a)	20 N.A.	Original	--	6/6-6/27	23	6	907.61	940.95	42.30	73.70	--	--	(a)	1,964.56
1780	S. Side of 213th St., from 115' - 415' E.E.C. 9th Ave.	6	Original	--	6/15-6/22	301	3	249.02	337.12	4.00	--	16.50	--		606.64
1781	N. Side of Broome St. from 12' W.W.C. Mott St., to 12' E.E.C. Mott St.	6	Replace	4 C.I.	6/16-7/13	6	-	442.62	176.84	36.37	--	9.60	30.55		695.98
1782	S. Side of Grand St., from 13' W.W.C. Mott St., to 13' E.E.C. Mott St.	6	Replace	4 C.I.	6/14-7/10	63	-	299.94	159.54	40.24	--	13.20	70.85		583.77
1783	S. Side of Grand St. from 13' W.W.C. Mott St. to 13' E.E.C. Mott St.	6	Replace	4 C.I.	6/13-7/10	68	6	280.68	173.64	49.29	--	8.40	--		512.81
1784	S. Side of Solarium Ave. from 6' E.W.C. of Center of Roadway to 28' E.E.C. of the West of Roadway	6 N.A.	Original	--	6/29-7/9	416	-	273.01	514.89	5.33	26.40	30.00	--		849.63
1785	E. Side of 2nd Ave. from 6' S.N.C. 96th St. to 6' N.N.C. 97th St.	10	Original	--	6/20-7/13	254.	10	552.70	1,721.32	106.77	--	19.20	--		2,399.99
1786	S. Side of 114th St. from 24' W.W.C. Park Ave. to 5' E.W.C. Park Ave. (a)	6 N.A.	Conn.6"N.A to 8" Conn.	--	6/22-6/26	26	10	79.46	75.55	--	--	2.40	--	(a)	157.41
1787	E. Side of Mott St. from 12' S.S.C. Broome St. to 12' N.N.C. Broome St.	6	Replace	C.I.	6/21-6/29	74	4	264.42	243.46	24.02	--	7.20	20.06		559.16

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST: PAYROLL LABOR	COST: MATERIAL: PIPE AND SPECIALS	COST: MATERIAL: DIST. SUPP. & EXPENSES	COST: MATERIAL: CARTAGE	COST: MATERIAL: AUTO SUPP.	COST: MATERIAL: OTHER ITEMS	TOTAL COST
1788	S. Side of 114th St. from 6 W.E.C. 5th Ave. to 12 E.E.C. 5th Ave. (a)	6 N.A. C.I.	Original	--	7/2 - 7/5	16	6	$ 60.95	$ 45.35	$ 2.12	--	$ 3.60	--	(a) $ 110.02
1789	E. Side of Mott St. from 12' S.S.C. of Spring St. to 12' N.N.C. of Spring St.	6	Replace	4 C.I.	7/5 - 7/21	60	--	4[illegible]	139.23	59.64	--	8.40	$ 21.31	656.64
1790	N. Side of Grand St. from 13 E.E.C. Mott St. to 13 W. W. C. Mott St.	6	Replace	4 C.I.	7/11 - 7/18	82	--	155.21	125.18	4.50	--	4.80	--	289.69
1791	E. Side of Mott St. from 12' S S.C. Prince St. to 12' N.N.C. Prince St.	6	Replace	4 C. I.	7/19-- 7/30	57	6	287.59	224.39	9.38	--	9.60	28.44	559.40
1792	S. Side of 112th St. from 5' W.E.C. 5th Ave. to 17' E.E.C. 5th Ave. (a)	6 Stand	Conn. 5" Stand to 20" Conn.	--	7/23 - 7/25	23	9	89.46	64.38	2.99	--	3.60	--	160.43
1793	E. Side of Bedford St.. from 5' N.S.C. Carmine St. to 26' N.S.C. Carmine St.	4	Original	--	7/16 - 7/21	25	9	35.36	39.14	--	--	2.40	18.59	95.49
1794	E. Side of Mulberry St. from 15' S.S.C. Prince St. to 15' N.N.C. Prince St.	6	Replace	4 C.I.	7/23 - 8/4	62	10	350.12	233.61	17.86	--	14.40	39.50	655.49
1795	N. Side of 104th St. from 5' W.W.C. 3rd Ave. to 5' E.W.C. 3rd Ave. and 5' W.W.C. 3rd Ave. to 14'W.W.C. 3rd Ave.	6	Replacing 3" and part new installation.	3	7/28 - 8/7	32	-	169.48	141.93	13.12	--	7.20	85.86	437.59
1796	S. Side of 70th St. from 5' W.E.C. 2nd Ave. to 4' W.E.C. 1st Ave.	6	Original	--	8/1 - 9/5	703	5	2,605.82	1,028.31	28.96	$180.10	148.86	628.09	4,620.16
1797	E. Side of Bennett Ave. from South Curb Line 184th St. to 290' N.N.C. 184th St.	8	Original	--	8/16 - 8/27	320	-	428.79	606.55	2.67	--	18.00	--	1,056.01
1798	E. Side of 194th St. from 18' E.E.C.Bennett Av. to 23' W.W.C. Bennett Av.	6	Original	--	8/18 - 8/30	80	6	147.04	119.57	1.60	--	9.38	--	277.59

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST						
									MATERIAL					
								PAYROLL LABOR	PIPE AND SPECIALS	DIST. SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS	TOTAL COST.
1799	S. Side of Spruce St. from 20' W.W.C. William St. to 295' W.W.C.William St.	6	Replace	4 C.I.	8/14-8/28	268	--	$ 634.48	$ 343.19	$ 7.47	$ 9.90	$ 6.00	$ 10.45	$1,011.49
1800	N. Side of 131st St. from 6' W.E.C. Madison Ave. to 16 E.E.C. Madison Ave.	6	Original	--	8/17-8/21	27	6	61.45	327.36	--	--	4.50	53.33	446.64
1801	N. Side of 131st St. from 17' W.W.C. Madison Ave. to 7' E.W.C. Madison Ave.	6	Original	--	8/18-8/23	25	6	74.32	288.49	--	--	4.50	51.35	418.66
1802	S. Side of Spruce St. from 6' W.E.C. Gold St. to 222' W.W.C. Gold St.	6	Replace	4 C.I.	8/20-9/11	256	1	726.84	399.25	24.10	8.80	8.40	398.72	1,566.11
1803	N. Side of 17th St. from 2' E.E.C. 9th Ave. to 11' 4" W.E.C. 9th Ave.	20	Conn.20" Con. to 20" N.A.	--	8/8-8/27	--	--	596.01	608.45	18.19	11.00	19.20	234.22	1,487.07
1804	W. Side of 10th Ave. from 0' 8" S.E.C. 17th St. to 10' S.E.C. 17th St.	12	Original	--	8/6-8/24	14	11	530.94	436.13	7.05	27.50	21.60	187.20	1,206.42
1805	E. Side of 6th Ave. from 8' 8" S.E.C. 17th St. to 17' 8" S.E.C. 17th St.	16	Conn. 16"N.A., to 24" Conn.	--	8/14-9/7	11	8	514.88	431.26	11.22	19.80	20.40	--	997.56
1806	W. Side of Ave. "A" from 62nd St. to 63rd St. (a)	30 Stand	Conn.24" Con.	to 30" Con.	10/3-10/24	78	4	994.00	1,[illegible]	2.56	68.00	83.33	--	2,721.78
1807	E. Side of 131st St. from 18' E.E.C. Lenox Ave. to 17' W.E. C.Lenox Ave.	6	Original	--	8/29-9/4	36	2	149.67	348.45	1.90	--	3.00	56.86	559.90
1808	S. Side of 63rd St. from 13' E.W.C. Madison Ave. to 38' E.W.C. Madison Ave.	6	Original	--	7/21-7/24	53	-	84.77	102.87	39.26	3.30	--	77.81	308.01

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST PAYROLL LABOR	COST MATERIAL PIPE AND SPECIALS	COST MATERIAL DIST.SUPP. & EXPENSES	COST MATERIAL CARTAGE	COST MATERIAL AUTO SUSP.	COST MATERIAL OTHER ITEMS		COST TOTAL COST
1809	N. Side of 42nd St. from 370' E.E.C. 1st Ave. to 410' E.E.C. 1st Ave. and from 4' S.N.C. 42nd St. to 6' S.N.C. 42nd St.	4	Original	--	9/4-9/11	97	--	$173.43	$131.30	--	--	$ 9.00	--		$ 313.73
1810	S. Side of 69th St. from 10" E.E.C. Bway to 14' E.E.C. Bway (a)	6 N.A.	Extending 6"N.A.Dead into Con.	--	9/28-10/1	4	--	58.22	56.70	$ 2.14	$ 17.60	--	--	(a)	134.66
1811	S. Side of 69th St., from at 33'W.W.C.Cent.Pk,West to 7' N.S.C. 69th St. 9' N.S.C. 69th St. (a)	6 N.A.	Conn.6"N.A., to 6" Std.	--	9/15-9/18	5	--	48.00	22.13	7.83	17.60	--	--	(a)	95.56
1812	E. Side of 6th St. from 8' 8" S.N.C. 17th St. to 12'10" S.N.C.17th St.	12	Conn. 12" Con. to 24" Con.	--	8/16-9/8	10	9	398.70	332.23	3.47	17.60	16.80	117.08		885.88
1813	S. Side of Dey St. from 75' E.E.C. Greenwich St. to 165' E.E.C. Greenwich St.	6	Replace	4 C.I.	9/5-9/18	86	5	240.04	174.32	17.28	--	7.80	--		439.44
1814	W. Side of 2nd Ave. from 1'6" S.S.C. 129th St. to 18' 0" S.S.C. 129th St. (a)	6	Replace	12 C.I.	9/9 - 9/9	16	6	17.81	35.47	--	--	2.40	--	(a)	55.68
1815	W.Side of Ave. "A" from 4'5" N.S.C. 79th St. to 9'0" N S.C. 79th St. and from 1'5" W.W.C. Ave. "A" to 10'0" W.W.C.Ave. "A"	6	Conn.6" Con to 8" Con.	--	8/2-8/24	13	2	165.96	82.57	--	--	13.13	5.31		266.97
1816	E. Side of Park Ave. from 6' N.S.C. 109th St. to 9' N.S.C. 109th St. (a)	4 Std.	Conn. 4" Std. to 24" Con.	--	9/11-9/13	4	9	60.80	19.07	.39	--	3.60	--		83.86
1817	S. Side of 163d St., from 6' E.W.C. Pinehurst Ave. to W.C.L.Pt. Washington Ave.	6	Original	--	9/12-11/16	265	--	747.33	370.67	5.33	--	36.69	271.55		1,431.57

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CONSOLIDATED GAS CO. - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST							
									MATERIAL						
								PAYROLL LABOR	PIPE AND SPECIALS	DIST.SUPP. & EXPENSES	CARTAGE	AUTO SUSP.	OTHER ITEMS		TOTAL COST
1818	W. Side of Pinehurst Ave. from 20' S.S.C. 183d St., to 24' N.N.C. 183d St.	6	Original	--	9/13-10/5	81	6	$ 239.34	$ 114.72	--	--	$ 12.00	--		$ 366.06
1819	S. Side of 56th St., from at 35 E.E.C. 5th Ave. to 6' N.S.C. 56th St., 8' N.S.C. 56th St., (a)	4 STD.	Conn. 4" Std. to 6" N.A.	--	9/20-10/5	2	-	68.40	39.46	$ 7.79	$ 3.30	--	--	(a)	118.95
1820	N. Side of 46th St. from E.Curb line of Bway to 5' W.E.C. Bway and 48'9" N.N.C. 46th St. 53'8" N.N.C. 46th St. (a)	20 STD.	Conn.20" Std. to 30" Con.	--	10/1-10/11	15	3	491.68	588.45	38.60	38.40	48.38	--	(a)	1,205.51
1821	S. Side of 176th St. from 6'E.W.C.Bway to 5' E.W.C.Wash. Ave.	6	Original	--	(Totals Not Brought Down)										
1822	S. Side of 175th St., from 8' E.W.C.Bway to 35' W.E.C.Ft. Wash. Ave.	6	Original	--	10/6-10/31	458	-	825.08	691.06	14.07	--	12.60	$90.06		1,632.87
1823	S. Side of 174th St. from 8' E.W.C. Bway to 35' W.E.C. Ft. Wash. Ave.	6	Original	--	10/8-10/22	493	-	598.47	713.55	6.98	26.25	9.60	119.92		1,474.77
1824	N. Side of 51st St. from 4'6" W.W.C. 2nd Ave. to 4'3" E.W.C. 2nd Ave.	6	Replace	4 C.I.	10/20-10/23	9	5	28.53	26.91	6.82	--	1.20	--		63.46
1825	S. Side of 78th St. from 9'6" E.E.C.Bway to 17'6" E.E.C. Bway (a)	6 N.A.	Conn.6" N.A. to 6" Con.	--	9/10-9/10	8	6	20.48	26.82	--	--	--	--	(a)	47.30
1826	E. Side of 12th Ave. from 4' S.N.C. 55th St. to 66' N.S.C. 55th St.	6	Original	--	11/5 - 11/15	92	7	296.74	152.32	4.40	--	27.97	152.43		633.86
1827	S. Side of Thomas St. From 6'9" E.E.C.Trimble Place to 6'9" N.S.C. Thomas St. to 9'6" N.S.C. Thomas St.	4	Original	--	10/30-10/30	2	9	3.84	39.85	.64	--	--	--		44.33

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CONSOLIDATED GAS CO., - NEW YORK

MAINS LAID IN 1923

FOLIO NO.	LOCATION	SIZE LAID (INCHES)	ORIGINAL OR TO REPLACE	SIZE REPLACED	DATE BEGUN AND COMPLETED	LAID FEET	LAID INCHES	COST MATERIAL PAYROLL LABOR	PIPE AND SPECIALS	DIST. SUPP. & EXPENSES	CARTAGE	AUTO SUSN.	OTHER ITEMS		TOTAL COST.
1828	N. Side of 26th St., from 4' W.E.C. 10th Ave. to 1'6" W.E.C. 10th Ave. (a)	8	Replace	4 C.I.	10/31	3	6	$ 4.39	$ 25.00	$ 2.71	—	--	--	(a)	$ 32.10
1829	S. Side of 68th St. from at 20' W.W.C. Central Pk.W. to 6' N.S.C. Central Pk.W. to 7'6" N.S.C. Central Pk.W. (a)	6 N.A.	Connecting 6" N.A. to 6" Std.	--	11/1 - 11/3	3	5	48.08	19.86	10.75	$ 1.10	--	--	(a)	79.79
1830	S. Side of 68th St., from 10' E.E.C. Bway to 12' E.E.C. Bway (a)	6	Connecting 6" Con. to 6" N.A.	--	11/1 - 11/7	6	-	56.32	33.88	—	2.20	--	--	(a)	92.40
1831	S. Side of Thomas St. from 70' 10" E.E.C. Trimble Pl. to 6'9" N.S.C. Thomas St.	4	Original	—	10/30	Not Stated		2.74	29.22	.39	—	--	--		32.35
1832	W. Side of 7th Ave. from 1'3" S.N.C. 17th St. to 6'3" S.N.C. 17th St. & from 9'3" E.W.C. 7th Ave. to 11'9" E.W.C. 7th Ave.	8	Connecting 8" Std. to 24" Con.	--	11/23 - 12/1	9	6	192.87	162.86	7.68	—	$ 7.20	91.74 4.62		466.97
1833	N. Side of 51st St. from 2'9" W.E.C. 2nd Ave. to 9'3" W.E.C. 2nd Ave.	6	Replace	4 C.I.	11/27 - 12/1	7	1	10.35	28.50	7.72	—	--	--		46.57
1834	S. Side of Chittenden Place from 5' W.E.C. Northern Ave. to 151' West of Northern Ave.	6	Original	--	12/5 - 12/19	150	-	578.70	232.20	.35	--	89.56	$268.31		1,169.12
1835	N. Side of 21st St.,	36	Original			(Not Completed)									
1836	E. Side of Ave. "A"	30	Original			(Not Completed)									
1837	E. Side of Ave. "A"	36	Original			(Not Completed)									
1838	W. Side of Mulberry St. from 1' N.N.C. Spring St. to 12' N.N.C. Spring St	6	Replace	3 C.I.	12/20-12/28	11	6	52.16	21.01	--	--	4.80	79.80		157.77
1839	S. Side of 174th St. from 35' E.E.C. Amst. Ave. to 3'4" N.S.C. 174th St.	4 Valve	Original	—	12/27-12/29	--	—	56.39	30.18	--	--	4.20	—		90.77

(a) Charged to Sundry Debtors.
(b) Charged to Sundry Debtors - #1728-$140.55; #1729-$70.87; #1731-$83.78; #1732-$134.63; #1733-$94.08; #1734-$86.33.
(c) Of which charged to Sundry Debtors - #1746 - $247.64

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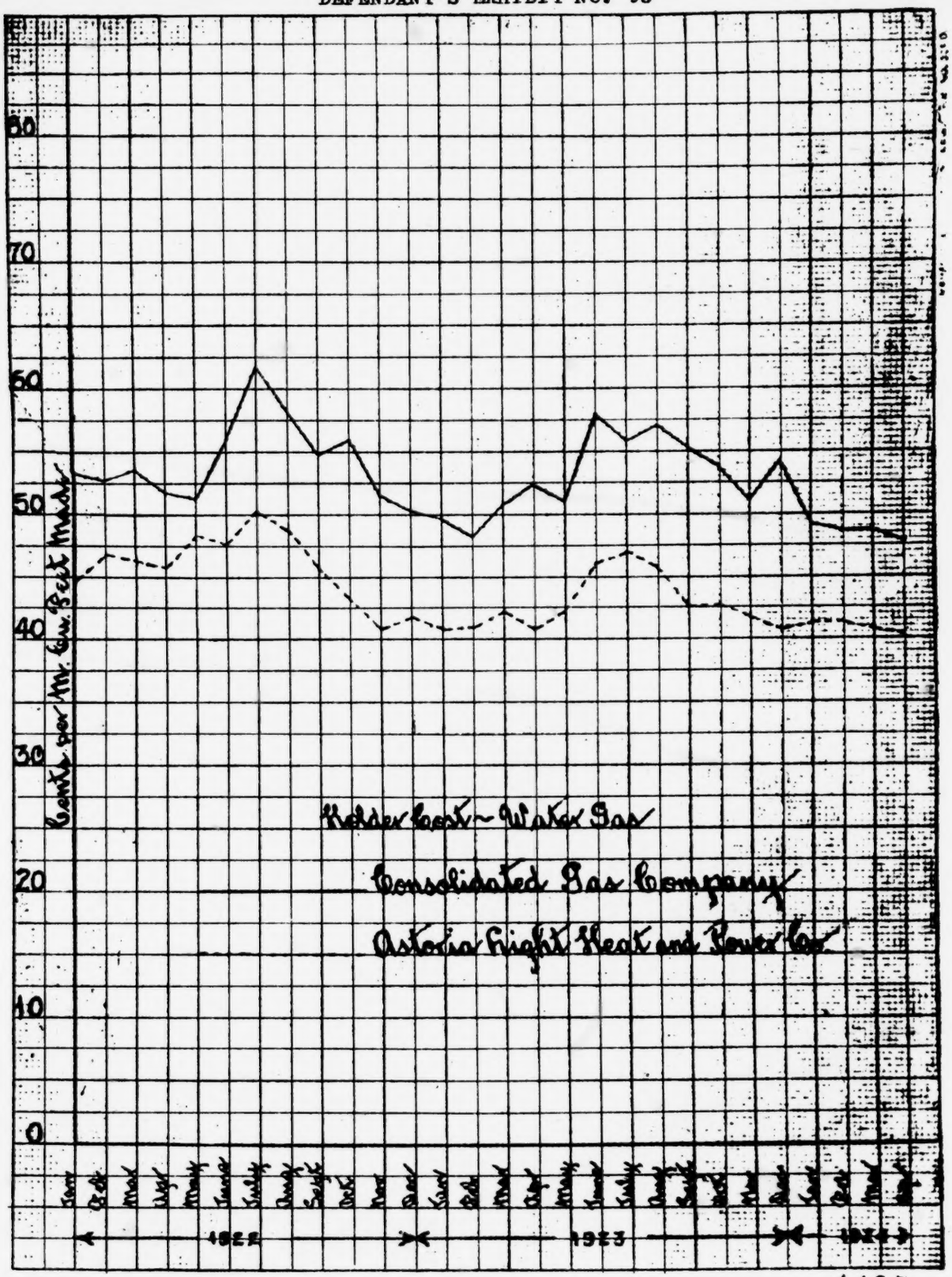
DEFENDANT'S EXHIBIT NO. 95



[fol. 4497] Recapitulation of Works' B. T. U. Test for the 12th Months of 1923 for All Plants on the General Transfer System

Monthly Averages of Daily Averages

Period	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	12 months
Consolidated Gas Co. of N. Y.:													
11th St. Station (Water Gas)	609	610	608	602	597	589	591	592	593	593	593	594	600
21st St. " "	604	601	604	606	592	588	586	589	589	595	593	591	596
99th St. " "	600	595	602	602	592	584	586	594	604	604	589	585	595
11th, 21st & 99th St. Sta. (Water Gas)	...	604	605	604	594	588	588	591	592	595	593	591	597
Total all Stations (Mixed Gas)	...	604	605	604	594	588	588	591	592	595	593	591	597
New Amsterdam Gas Co.:													
(Incl. East River Gas Co. of L. I.) (Water Gas)	608	610	609	602	590	580	580	588	592	592	586	590	...
Central Union Gas Co.:													
(Coal Gas)	610	599	610	614	601	602	593	584	581	583	596	588	597
(Water Gas)	602	621	617	603	588	583	586	589	586	585	590	586	596
Mixed Gas (Observed)	606	600	604	580	588	581	596	582	587	582	578	590	590
The Standard Gas Light Co.:													
Water Gas	619	615	608	609	600	595	596	610	602	595	595	597	603
The Astoria Light, Heat & Power Co.:													
Plant A (Coal Gas)	578	578	574	577	584	581	589	592	582	589	581	575	582
" B "	565	561	566	574	571	568	573	582	583	584	582	582	574
" A & B "	572	570	570	575	577	573	579	586	583	586	581	578	578
" C (Water Gas)	599	604	614	606	590	592	597	587	593	596	593	589	597
" D "	596	598	613	611	595	589	595	583	585	588	588	578	585
" C & D "	597	601	613	609	592	590	596	585	589	592	590	584	595
All Plants (Mixed Gas)	589	592	600	601	588	584	590	589	586	582	586	586	589

[fol. 4498] As heretofore stated, my final results are predicated upon the quality of gas made at the Astoria plants.

In the foregoing figures, a straight average heating value of the gas at each plant is given, and this does not show a reliable figure, as the quantities of each quality made in the various months differ materially. This feature is given weight in the next following table, which shows an average of 590.24 at the Astoria plants in 1923.

The Astoria Light, Heat and Power Company

Calculations Showing Method of Arriving at Weighted Average British Thermal Heat Units Per Cubic Foot, 1923

1923	January	February	March	April	May	June	July
Plant "A"	188,503,718	166,048,418	179,710,790	100,878,064	105,167,888	84,416,976	72,772,717
" "B"	181,390,425	158,955,984	169,017,788	117,164,880	123,985,227	122,287,560	124,479,093
" "C"	388,543,746	372,355,732	394,770,072	355,672,914	290,387,970	177,117,520	161,280,147
" "D"	464,339,428	445,691,194	454,491,073	399,864,673	283,393,740	194,292,252	185,364,515
Total M Heat Units.	1,222,777,317	1,143,051,328	1,197,989,723	973,580,531	802,934,825	578,114,308	543,896,472
Total Gas Made M ft.	2,074,923	1,932,411	1,996,072	1,620,314	1,365,694	989,644	922,482
Average Heat Unit per ft.	589.31	591.52	600.17	600.86	587.93	584.16	589.60

1923	August	September	October	November	December	Total
Plant "A"	74,323,824	71,612,772	104,542,199	156,416,239	177,150,025	1,481,543,630
" "B"	112,888,212	108,976,109	115,279,848	127,525,512	142,881,000	1,604,831,638
" "C"	177,812,279	216,889,750	276,058,260	333,806,816	397,577,945	3,542,273,151
" "D"	177,007,545	224,592,615	274,261,428	387,387,924	387,720,666	3,878,407,053
Total Heat Units	542,031,860	622,071,246	770,141,735	1,005,136,491	1,105,329,636	10,507,055,472
Total Gas Made M ft	926,045	1,059,638	1,304,504	1,710,070	1,899,389	17,801,186
Average Heat Units per ft	585.31	587.06	590.37	587.78	581.94	590.24

[fol. 4499] Statistics have been collected showing the make and disposition of gas during a period sufficiently prolonged to iron out any abnormalities in particular years. The figures given below have been taken into account in the manner subsequently shown in arriving at the estimate of gas to be made, sold and used by plaintiff in the nominal year under review.

Consolidated Gas Company

Gas Made, Bought, Sold, Used, and Unaccounted for, M Cubic Feet

	1909	1910	1911	1912	1913	1914	1915
Gas on hand beginning of yr.	23,279	25,455	26,999	35,409	28,,477	29,091	30,585
Gas made	10,086,579	10,348,051	10,541,960	10,189,901	6,915,624	6,533,474	5,984,020
Gas bought.	6,004,083	6,312,897 2	6,326,775 27	7,870,971 2	10,958,955 4	11,611,910	B10,949,614 8
Total available	16,113,941	16,686,403 2	16,895,734 27	18,096,281 2	17,903,056 4	18,174,475	16,964,219 8
Gas sold other companies.	52,239	33,439 5	188,171 1	A731,214 4	770,181 6	866,961	677,234 7
Gas sold to consumers	15,246,598	16,010,833 2	16,145,516 4	16,621,200 6	16,553,735 7	16,508,901	15,679,825 3
Gas used.	63,824	74,425 2	76,431 3	77,551 5	68,951 1	67,381	73,299 2
On hand end of year	25,455	26,999	35,409	28,477	29,091	30,585	29,624
Total accounted for	15,388,116	16,145,696 9	16,445,527 8	17,458,443 5	17,421,959 4	17,473,828	16,459,983 2
Unaccounted-for	725,825	*540,706 3	450,206 47	637,837 7	481,097	700,647	504,236 6
% Unaccounted for	4 50	3 24	2 66	3 52	2 69	3 86	2 97

	1916	1917	1918	1919	1920	1921	1922	1923
Gas on hand beginning of yr.	C35,793	38,450	28,545	39,628	42,132	39,733	E47,536	52,666
Gas made	7,163,183	7,322,846	D7,987,405	7,221,664	8,544,693	6,780,499 3	8,204,826	9,804,127
Gas bought.	10,289,661 5	11,150,798 5	11,567,651 2	12,705,973 6	13,634,900 2	13,724,267 2	13,803,569 7	15,419,848 5
Total available	17,488,637 5	18,512,094 5	19,583,601 2	19,967,265 6	22,221,725 2	20,544,499 5	22,055,931 7	25,276,641 5
Gas sold other Co's.	288,046 5	139,103 2	267,201 3	.....	54,183 5	.....	.....	.....
Gas sold to consumers	16,295,126 6	16,891,064 1	18,029,245	18,576,440 3	20,753,111 6	19,396,607 1	20,580,285 6	24,057,694 2
Gas used.	69,464 7	76,250 1	67,427 8	65,133 8	63,135 7	59,293 9	62,138 9	75,447 6
On hand end of year	38,450	28,545	39,628	42,132	39,733	39,904	52,666	57,286
Total accounted for	16,691,087 8	17,134,962 4	18,403,502 1	18,683,706 1	20,910,163 8	19,495,805	20,695,090 5	24,190,427 8
Unaccounted-for	797,549 7	1,377,132 1	1,180,099 1	1,283,559 5	1,311,561 4	1,048,694 5	1,360,841 2	1,086,213 7
% Unaccounted for	4 56	7 44	6 03	6 43	5 90	5 10	6 17	4 30

(*) Indicated, not actual, in 1910. (A) Table #12 reconciled with page 451, year 1912. (B) Table #12 reconciled with page 503, year 1915. (C) Company corrected previous report in 1916 report. Table #12 reconciled with page 793, year 1918. (E) Includes gas at 11th Street on 8-31-22—7,632 M cu. ft.

[fols. 4495a & 4496] Before Special Master Hon. James G. Graham

Consolidated Gas Company of New York

Estimate of Reasonable Operating Cost for Ensuing 12 Months Based Upon the Quality of Gas Made in 1923

A. S. B. Little

I have estimated and hereinafter shown the quantity of gas to be made by or for the plaintiff, for sale to its consumers and for its own use. The nominal year selected is the twelve months ending April 30, 1925.

The calculations are based upon the plaintiff's books and records and on those of its manufacturing subsidiary, The Astoria Light, Heat & Power Company, to the extent herein shown. The various steps are set forth in detail, so that the parties interested can ascertain how the various figures and estimates of cost were finally reached.

For the reasons later given, my final estimates are based upon the average qualities of gas made and reported from month to month, during 1923, by The Astoria Light, Heat and Power Company. They do not show, on their face, the cost to produce or to "furnish" gas of 650 B. T. U. quality; but it is my judgment that, by revision, they can be amended so as to closely indicate the cost to produce he statutory quality gas.

I am unable to suggest the extent of the increase in cost to produce gas that will furnish to all consumers a maximum of 650 B. T. U. per cubic foot, having had no direct experience in manufacuring or seeing others deliberately make gas that would deliver to each and every consumer on a distribution system a gas of such quality. The cost of production would be speculative in the absence of data acquired by those skilled in the art of supplying artificial gas. If such a gas were furnished, the quantity that would be sold would be problematical.

The monthly average qualities of gas delivered to the General Transfer System by the plantiff and its subsidiaries, respectively, are shown on the following table:

(Here follow side folios pages 4497, 4498, and 4499)

[fol. 4500] The figures on the preceding table show that in 1923 the Consolidated Gas Company made in its own plants less than 39 per cent of the gas produced for its own use and for sale to its general consumers. Of the 61% purchased (15,419,848,500 ft.) 15,017,903,700 feet was provided by the Astoria Light, Heat and Powder Company, the balance being credited to the Standard Gas Light Company and the New Amsterdam Gas Company. Nearly 60% of the gas needed for sale and use was produced at Astoria.

Before the estimated operating expenses can be ascertained, it is necessary to form a judgment as to the amount of gas that will be sold and used by the plaintiff.

In the year 1923, the sales increased over those of 1922 by 3,477,408,600 cubic feet, or about 17%. A similar increase in the next 12 months would result in the sales by the plaintiff reaching close to 28,148,000,000 cubic feet.

It is hardly possible that this phenomenal percentage of annual increase will be duplicated in the following year. I therefore believe due consideration should be given to figures dealing with a longer period and relating to (a) sales of gas, (b) increase or decrease in succeeding years, (c) percent of increase or decrease, (d) number of consumers in each year, (e) increase or decrease of consumers in succeeding years, and (f) percent of increase or decrease. See following tables:

Gas Sales

Year	M cu. ft.	Inc. or (d) decrease, M cubic feet	Inc. or (d) decrease, per cent
1909	15,246,598.0	.....	.....
1910	16,010,833.2	764,235.2	5.0125
1911	16,145,516.4	134,683.2	.8412
1912	16,621,200.6	475,684.2	2.9462
1913	16,553,735.7	(d) 67,464.9	(d) .4059
1914	16,508,901.0	(d) 44,834.7	(d) .2708
1915	15,679,825.3	(d) 829,075.7	(d) 5.0220
1916	16,295,126.6	615,301.3	3.9242
1917	16,891,064.1	595,937.5	3.6572
1918	18,029,245.0	1,138,180.9	6.7384
1919	18,576,440.3	547,195.3	3.0350
1920	20,753,111.6	2,176,671.3	11.7174
1921	19,396,607.1	(d) 1,356,504.5	(d) 6.5364
1922	20,580,285.6	1,183,678.5	6.1025
1923	24,057,694.2	+3,477,408.6	16.8968
1909 to 1923		8,811,096.2	57.7906%
Average yearly increase in 14 years			4.1279%

NOTE.—In 1922, the Consolidated Gas Company took over the business of the New York Mutual Gas Light Company, and the above figures reflect the increase in sales during 1922 and 1923.

The next table gives Consumer Data:

[fol. 4501] Consumer Data (Active Meters)

Year	Number	Increase or (d) decrease (number)	Inc. or (d) decrease (per cent)
1909	446,306	.....	.....
1910	469,571	23,265	5.213
1911	476,931	7,360	1.567
1912	483,727	6,796	1.425
1913	486,579	2,852	.590
1914	486,958	379	.078
1915	489,147	2,189	.450
1916	497,352	8,205	1.677
1917	502,445	5,093	1.024
1918	500,996	(d) 1,449	(d) .288
1919	504,764	3,768	.752
1920	517,087	12,323	2.441
1921	514,706	(d) 2,381	(d) .460
1922	555,971	41,265	8.017
1923	560,189	4,218	.759

NOTE.—Includes meters taken over in 1922 from N. Y. Mutual Gas Light Co. To get the average per cent increase, I have excluded the years 1922 and 1923, as the figures for those two years include the wholesale increase in active meters taken over from the Mutual Company. The average per cent increase in 12 years to 1922 was 1.277.

After getting the foregoing figures it was necessary to make a further investigation of the sales of gas, to ascertain how the consumption varied per active meter in the various years under consideration. This information is set forth in the next table.

Consumption Data, Cubic Feet.

Year	Consumption per active meter
1909	34,162
1910	34,097
1911	33,853
1912	34,361
1913	34,021
1914	33,902
1915	32,055
1916	32,764
1917	33,618
1918	35,987
1919	36,802
1920	40,135
1921	37,680
1922	37,017
1923	42,946
Average per consumer	35,560

feet over period of 15 years.

With the foregoing information before me, I have given weight and consideration to it in the following manner.

[fol. 4502] The number of consumers for nominal 12 months period used in my calculations was arrived at as follows:

Consumers in 1923	560,189
Average increase % in 12 years	1.277%
Consumers in 1924-1925 (101.277% of 560,189)	567,343

On various bases, using foregoing figures, the sale of gas in the nominal 12 months would be as follows:

1923 basis of sales per consumer X 567,343 consumers—24,365,112 M cu. ft.

15 year average sales per consumer X 567,343 consumers —20,174,717 M cu. ft.

5 year average sales per consumer X 567,343 consumers—22,079,288 M cu. ft.

The sales of gas in 1924, by months, as compared with 1923, were ascertained as far as possible. To date, I have secured this information for January, February, March and April, 1924, and on June 2, 1924, no other figures were available to me.

Month	M cu. ft.		Inc. or (d) decrease	
	1923	1924	Amount	Per cent
January	2,564,871.7	2,467,527.6	(d) 97,344.1	(d) 3.795
February	2,752,876.9	2,664,249.0	(d) 88,627.9	(d) 3.219
March	2,635,404.4	2,695,838.0	60,433.6	2.293
April	2,431,130.7	2,320,425.1	(d) 110,705.6	(d) 4.555
Totals and averages.	10,384,283.7	10,148,039.7	(d) 236,244.0	(d) 2.275

There has been a falling off in sales 1924 as compared with 1923, during the 4 months for which I have the figures. It cannot be concluded that this decrease will be apparent in the remaining 8 months. On the other hand, there might be an increase in May sales due to the cold weather. Based upon 1923 sales, with a falling off in the first 4 months of 1924, we might on the same ratio calculate the sales for the nominal year at 23,510,381.7 M cu. ft. To be on the conservative side I use for my estimate of sales the round figure of 23,500,000 M feet, which does not allow for any increase in consumers in 1924 and is based on a decrease in use per consumer as compared with 1923 records.

To arrive at the amount of gas to be made, we must add the amount likely to be used by the Company and a fair allowance for gas unaccounted for.

[fol. 4503] Amount of Fas to be Made

In arriving at the amount of gas likely to be used by the plaintiff and the Astoria works, I have adopted the following method:

Gas used at plaintiff's works and stations	13,867,500 ft.	
Deduct amount used at works (estimated)	10,000,000	
Gas assumed used at plaintiff's stations		3,867,500
Gas used at offices and sales rooms		39,907,400
Gas used at shops, etc.		17,857,700
Miscellaneous gas used		3,815,000
Gas used at Astoria works and stations		11,618,900
Total estimated use of gas		77,066,500
Gas estimated to be sold		23,500,000,000
Total gas accounted for		23,577,066,500
Gas made but not accounted for (4.5%)		1,110,961,248
Total gas estimated to be made		24,688,027,748

Cost of Production

Having estimated the amount of gas to be made, sold and used, it becomes possible to consider the cost to the plaintiff of producing the gas in a suitable plant or plants such as it owns or controls.

I have taken as the base of my calculations the cost to manufacture coal-gas and water-gas at the Astoria plants as shown by that company's records, but have modified the figures reported for the year 1923 when making my estimates, so as to show the result of changed costs for the principal production materials which enter into the manufacture of coal-gas and water-gas, respectively.

In setting up my table of production expense, I have included therein the book costs both for 1922 and 1923, because they indicate how conditions change from year to year. The tables referred to are as follows:

For coal-gas plants "A" and "B", tables are on sheets 9 and 9a; for water-gas, they appear on sheet 10 of this proposed exhibit.

(Here follows estimate of reasonable production costs, marked side folio pages 4504, 4505, and 4506)

[fol. 4507] In figuring the costs in various ways for making coal-gas and water-gas at the Astoria plants, I first ascertained the percentage of coal-gas and water-gas sent to the general Transfer System of mains by the various companies in the year 1923. It is not known from which plant a consumer on the System receives his gas.

The figures used in arriving at the percentage were taken from the records of the various companies, and are as follows:

Plant	Water gas, M cu. ft.	Coal gas, M cu. ft.
Standard	2,590,302	.....
New Amsterdam	5,593,831	.....
Astoria "A"	.....	2,553,650
" "B"	.....	2,799,702
" "C"	5,926,292	.....
" "D"	6,521,542	.....
Consolidated 14th St.	.....	.....
" 42d St.	.....	.....
" 11th "	3,638,340	.....
" 21st "	4,872,384	.....
" 99th "	1,293,403	.....
Central Union	2,525,918	938,249
Total	32,962,012	6,291,601
Percentage	83 97	16 03

A. S. B. Little

Estimate of Future Reasonable Production Costs

Section #1 of Table "A"—Coal Gas Costs—Astoria Light, Heat & Power Company

Item		Estimate				Year 1923				Year 1922			
		Plant "A"—12 mos.		Plant "B"—12 mos.		Plant "A"—1923		Plant "B"—1923		Plant "A"—1922		Plant "B"—1922	
	Gas to be Made and Gas Made M cu. ft.	3,541,497.6		3,882,933.0		2,553,650		2,799,702		2,424,201		2,518,155	
		Amount	Cost per M	Amount	Cost per M	Amount	Cost per M	Amount	Cost per M	Amount	Cost per M	Amount	Cost per M
33.	Residuals: Water Gas Tar Sold	3,188	.0009	3,495	.009	2,224	.0009	4,669	.0017	23,252	.0096	27,566	.0119
34.	Drip Oil Sold	.....	.....	.....	.....	85	.....	187	.....	874	.0004	826	.0003
35.	Total Residuals Sold	3,188	.0009	3,495	.0009	2,309	.0009	4,856	.0017	24,126	.0100	28,392	.0122
36.	Net Material	466,415	.1317	571,956	.1473	633,056	.2479	795,610	.2842	819,186	.3379	889,674	.3638
37.	Gas Making Labor—Superintendence	31,165	.0088	33,393	.0086	22,479	.0088	24,203	.0086	21,453	.0088	21,437	.0092
38.	Boiler House	13,104	.0037	15,143	.0039	9,559	.0037	11,040	.0039	12,300	.0051	12,051	.0052
39.	Retort House	239,405	.0676	234,529	.0604	172,576	.0676	169,013	.0604	154,177	.0636	144,850	.0625
40.	Purifier House	20,541	.0058	20,968	.0054	14,783	.0058	15,008	.0054	17,877	.0074	15,357	.0067
41.	Total Gas Making Labor	304,215	.0859	304,033	.0783	219,397	.0859	219,264	.0783	205,807	.0849	193,695	.0836
42.	Electric Power House Operating	48,164	.0136	84,649	.0218	34,696	.0136	61,139	.0218	39,484	.0163	41,572	.0179
43.	Total Material and Labor	818,794	.2313	960,638	.2474	887,149	.3474	1,076,013	.3843	1,064,477	.4391	1,124,941	.4853
44.	Repairs:												
45.	Water & Station Structures	41,790	.0118	29,510	.0076	25,504	.0100	18,073	.0065	32,935	.0136	20,343	.0088
46.	Furnaces, Boilers & Accessories	2,125	.0006	2,718	.0007	810	.0003	820	.0003	2,161	.0009	2,062	.0010
47.	Steam Engines	354	.0001	388	.0001	496	.0002	691	.0002	79	.....	77	.....
48.	Benches & Retorts	116,161	.0328	226,375	.0583	106,705	.0416	181,796	.0649	57,813	.0238	119,883	.0517
49.	Purification Apparatus	21,249	.0060	20,580	.0053	17,680	.0069	17,431	.0063	12,501	.0052	10,120	.0043
50.	Holders	2,833	.0008	3,495	.0009	1,683	.0007	2,531	.0009	1,914	.0008	1,907	.0009
51.	Miscellaneous Equipment	104,828	.0296	142,115	.0366	81,095	.0318	155,600	.0556	66,591	.0275	105,920	.0457
52.	Works Tools	11,333	.0032	5,436	.0014	8,168	.0032	4,082	.0014	7,546	.0031	3,565	.0015
53.	Total Repairs Labor	.....	.....	.....	.....	143,362	.0562	185,199	.0662	118,544	.0489	159,633	.0689
54.	Total Repairs Materials	.....	.....	.....	.....	98,779	.0387	195,825	.0699	62,996	.0260	104,244	.0450
55.	Total Repairs	300,673	.0849	430,617	.1109	242,141	.0949	381,024	.1361	181,540	.0749	263,877	.1139
56.	Miscellaneous Works Expense	96,329	.0272	102,509	.0264	69,525	.0272	73,903	.0264	70,034	.0289	75,010	.0323
57.	Gas Storage—Manufacturing Station	708	.0002	777	.0002	513	.0002	601	.0002	508	.0002	476	.0002
58.	Total Cost of Gas in Holder	1,216,504	.3435	1,494,541	.3849	1,199,328	.4697	1,531,541	.5470	1,316,559	.5431	1,464,304	.6317

(A)—Includes Enriching Oil.
(B)—Includes Tar.
Figures in Parentheses Indicate Credits.

[fol. 4505]

1.	Coking Coal	1,928,700	.5446	2,114,645	.5446	1,687,676	.6609	1,838,322	.6566	1,696,818	.6999	1,635,780	.7056
2.	Handling	93,495	.0264	108,334	.0279	67,472	.0264	77,958	.0279	70,424	.0291	69,307	.0299
3.	Total Coal	2,022,195	.5710	2,222,979	.5725	1,755,148	.6873	1,916,280	.6845	1,767,242	.7290	1,705,087	.7355
4.	Residuals:—Coke	1,733,917	.4896	1,901,085	.4896	1,250,352	.4896	1,357,223	.4848	1,181,942	.4876	1,129,002	.4870
5.	Coal Tar	186,991	.0528	178,615	.0460	134,726	.0528	128,793	.0460	133,596	.0551	105,356	.0455
6.	Ammoniacal Liquor	1,771	.0005	777	.0002	1,248	.0005	480	.0002	(1,488)	(.0006)	(623)	(.0003)
7.	Cyanogen	82,517	.0233	83,483	.0215	59,530	.0233	60,104	.0215	64,174	.0265	60,359	.0261
8.	Ammonia	10,979	.0031	10,872	.0028	7,923	.0031	7,887	.0028	8,739	.0036	8,185	.0035
9.	Ammonia Sulphate	147,326	.0416	171,237	.0441	106,218	.0416	123,416	.0441	110,425	.0455	101,797	.0439
10.	Carbon	708	.0002	388	.0001	480	.0002	240	.0001	480	.0002	240	.0001
11.	Ammonium Concentrate	9,916	.0028	13,590	.0035	7,232	.0028	9,971	.0035	1,287	.0005	1,195	.0005
12.	Total Residual Credit	2,174,125	.6139	2,360,047	.6078	1,567,709	.6139	1,688,114	.6030	1,499,155	.6184	1,405,511	.6063
13.	Deduct: Residual Expense—Coke	78,621	.0222	111,829	.0288	56,641	.0222	80,720	.0288	60,502	.0250	74,916	.0323
14.	Other Residuals	115,099	.0325	131,243	.0338	83,126	.0325	94,536	.0338	81,754	.0337	76,408	.0330
15.	Total Deductions	193,720	.0547	243,072	.0626	139,767	.0547	175,256	.0626	142,256	.0587	151,324	.0653
16.	Net Credit from Residuals	1,980,405	.5592	2,116,975	.5452	1,427,942	.5592	1,512,858	.5404	1,356,899	.5597	1,254,187	.5410
17.	Net Cost of Coal Carbonized	41,790	.0118	106,004	.0273	327,206	.1281	403,422	.1441	410,343	.1693	450,900	.1945
18.	Bench Fuel—Coke	261,008	.0737	281,513	.0725	188,217	.0737	247,238	.0883	168,179	.0694	(B)-194,986	.0841
19.	Boiler Fuel—Coal	4,958	.0014	5,824	.0015	3,589	.0014	4,120	.0015	721	.0003	715	.0003
20.	Boiler Fuel—Purchased Coke	2,125	.0006	2,330	.0006	1,594	.0006	1,672	.0006	101	.....	101	.0001
21.	Boiler Fuel—Coke	48,519	.0137	52,808	.0136	35,000	.0137	38,134	.0136	39,813	.0164	37,575	.0162
22.	Boiler Fuel—Water Gas Tar	44,623	.0126	48,537	.0125	32,003	.0126	34,832	.0125	29,110	.0120	27,817	.0120
23.	Handling Boiler Coal	.....	.....	.....	.....	134	.....	156	.....	20	.....	20	.....
24.	Handling Boiler Coke	1,771	.0005	1,941	.0005	1,211	.0005	1,372	.0005	1,079	.0005	1,014	.0004
25.	Handling Boiler Purchased Coke	.....	.....	.....	.....	19	.....	20	.....	.....	.....	.....	.....
26.	Total Coal Gas Fuel	363,004	.1025	392,953	.1012	261,767	.1025	327,544	.1170	239,023	.0986	262,228	.1131
27.	Gas Oil	20,187	.0057	22,133	.0057	15,111	.0059	30,204	.0108	(A)-165,423	.0682	(A)-175,036	.0755
28.	Iron Mass	21,249	.0060	23,297	.0060	15,232	.0060	16,763	.0060	14,681	.0061	14,045	.0061
29.	Water	15,228	.0043	18,250	.0047	10,910	.0043	13,129	.0047	10,816	.0045	10,970	.0047
30.	Sundry Supplies	4,958	.0014	8,154	.0021	3,629	.0014	6,045	.0021	3,026	.0012	4,887	.0021
31.	Handling Spent Material	3,187	.0009	4,660	.0012	1,510	.0006	3,359	.0012	.....	.....	.....	.....
32.	Total Material	469,603	.1326	575,451	.1482	635,365	.2488	800,466	.2859	843,312	.3479	918,066	.3960

A. S. B. Little

Estimate of Future Reasonable Production Cost

Section #2 of Table "A"—Water Gas Costs—Astoria Light, Heat & Power Company

		Estimate				Year 1923				Year 1922			
		Plant "C"—12 mos.		Plant "D"—12 mos.		Plant "C"—1923		Plant "D"—1923		Plant "C"—1922		Plant "D"—1922	
Gas to be Made and Gas Made (M cu. ft.)		8,219,138.1		9,044,459.0		5,926,292.0		6,521,542.0		3,555,370.0		6,398,448.0	
Item		Amount	Cost per M	Amount	Cost per M	Amount	Cost per M	Amount	Cost per M	Amount	Cost per M	Amount	Cost per M
1.	Coal in Generators	.....	.....	189,029	.0209	.....	.....	136,435	.0209	.....	.....	112,206	.0175
2.	Coke in Generators	1,070,954	.1303	946,955	.1047	772,401	.1303	683,035	.1047	452,612	.1273	666,784	.1042
3.	Purchased Coke in Generators	9,863	.0012	49,745	.0055	7,161	.0012	35,520	.0055	.....	.....	21,345	.0033
4.	Coal under Boilers	18,904	.0023	20,802	.0023	13,666	.0023	15,179	.0023	7,049	.0020	8,420	.0013
5.	Purchased Coke under Boilers	6,575	.0008	6,331	.0007	4,647	.0008	4,800	.0007	792	.0002	633	.0001
6.	Coke under Boilers	155,342	.0189	170,940	.0189	111,797	.0189	123,120	.0189	58,894	.0166	122,623	.0192
7.	Water Gas Tar under Boilers	145,479	.0177	160,087	.0177	105,075	.0177	115,589	.0177	75,326	.0211	114,017	.0178
8.	Handling Generator Coal	.....	.....	4,522	.0005	.....	.....	3,425	.0005	9	.....	3,171	.0005
9.	Handling Generator Coke	18,082	.0022	25,325	.0028	12,924	.0022	17,884	.0028	5,713	.0016	14,854	.0023
10.	Handling Boiler Coal	822	.0001	904	.0001	414	.0001	447	.0001	277	.0001	321	.0001
11.	Handling Boiler Purchased Coke	4,109	.0005	6,331	.0007	60	.....	1,279	.0002	27	.....	24	.....
12.	Handling Boiler Coke	.....	.....	.....	.....	2,786	.0005	3,070	.0005	2,113	.0006	4,338	.0007
13.	Handling Generator Purchased Coke	.....	.....	.....	.....	47	.....	49	.....	.....	.....	373	.0001
14.	Total Water Gas Fuel	1,430,130	.1740	1,580,971	.1748	1,030,978	.1740	1,139,832	.1748	602,812	.1695	1,069,109	.1671
15.	Gas Oil	1,656,978	.2016	1,818,841	.2011	1,235,441	.2085	1,356,389	.2080	865,586	.2435	1,512,546	.2364
16.	Iron Mass	19,726	.0024	21,707	.0024	14,149	.0024	15,578	.0024	8,652	.0024	15,505	.0024
17.	Shavings	822	.0001	904	.0001	657	.0001	725	.0001	627	.0002	1,085	.0002
18.	Water	14,794	.0018	17,185	.0019	10,677	.0018	12,276	.0019	7,414	.0021	13,475	.0021
19.	Sundry Supplies	8,219	.0010	8,140	.0009	6,045	.0010	6,045	.0009	3,505	.0010	5,114	.0008
20.	Handling Spent Material	4,932	.0006	4,522	.0005	3,612	.0006	3,275	.0005	.....	.....	.....	.....
21.	Total Material	3,135,601	.3815	3,452,270	.3817	2,301,559	.3884	2,534,120	.3886	1,488,596	.4187	2,616,834	.4090
22.	Residuals:—Water Gas Tar Used	189,040	.0230	214,354	.0237	136,057	.0230	154,491	.0237	89,197	.0251	160,232	.0251
23.	Water Gas Tar Sold	102,739	.0125	115,769	.0128	73,869	.0125	83,522	.0128	57,569	.0162	73,061	.0114
24.	Water Gas Tar Variation on Hand	(1,644)	(.0002)	(14,471)	(.0016)	(1,230)	(.0002)	(10,485)	(.0016)	(850)	(.0002)	6,989	.0011
25.	Drip Oil Sold	13,151	.0016	15,375	.0017	9,637	.0016	10,853	.0017	6,183	.0017	9,956	.0016
26.	Drip Oil Variation on Hand	822	.0001	.....	.....	561	.0001	452	.....	267	.0001	270	.....
27.	Total Residuals	304,108	.0370	331,027	.0366	218,894	.0370	238,833	.0366	152,366	.0429	250,508	.0392
28.	Net Material	2,831,493	.3445	3,121,243	.3451	2,082,665	.3514	2,295,287	.3520	1,336,230	.3758	2,366,326	.3698
29.	Gas Making Labor—Superintendence	32,055	.0039	32,560	.0036	23,003	.0039	23,719	.0036	15,157	.0043	26,216	.0041
30.	Boiler House	51,780	.0063	55,171	.0061	37,491	.0063	39,525	.0061	21,460	.0060	48,527	.0076
31.	Generator House	161,917	.0197	130,240	.0144	116,592	.0197	93,930	.0144	69,304	.0194	101,729	.0159
32.	Purifier House	4,110	.0005	8,140	.0009	3,039	.0005	6,167	.0009	3,384	.0010	4,310	.0007
33.	Total Gas Making Labor	249,862	.0304	226,111	.0250	180,125	.0304	163,341	.0250	109,305	.0307	160,782	.0283
34.	Electric Power House Operating	38,630	.0047	31,656	.0035	27,947	.0047	22,781	.0035	10,420	.0030	31,571	.0049
35.	Total Material and Labor	3,119,985	.3796	3,379,010	.3736	2,290,737	.3865	2,481,409	.3805	1,455,955	.4095	2,578,679	.4030
36.	Repairs:												
37.	Works and Station Structures	34,521	.0042	19,898	.0022	14,222	.0024	15,239	.0024	21,344	.0060	13,790	.0021
38.	Furnaces, Boilers & Accessories	35,342	.0043	28,942	.0032	21,987	.0037	17,982	.0028	17,434	.0049	21,787	.0035
39.	Steam Engines	12,329	.0015	4,522	.0005	5,385	.0009	4,371	.0006	7,561	.0021	3,251	.0005
40.	Water Gas Sets & Accessories	129,040	.0157	103,107	.0114	59,307	.0100	79,181	.0121	75,838	.0214	68,333	.0106
41.	Purification Apparatus	15,616	.0019	6,331	.0007	6,827	.0012	5,604	.0008	9,641	.0027	3,909	.0007
42.	Holders	9,041	.0011	6,331	.0007	4,905	.0008	5,987	.0010	5,171	.0014	2,977	.0004
43.	Miscellaneous Equipment	75,616	.0092	74,165	.0082	48,479	.0082	55,236	.0085	36,437	.0102	49.748	.0078
44.	Works Tools	8,219	.0010	7,236	.0008	5,222	.0009	5,380	.0008	3,673	.0011	5.935	.0009
45.	Total Repairs Labor	.....	.....	.....	.....	107,868	.0182	114,368	.0175	97,062	.0273	107,074	.0167
46.	Total Repairs Materials	.....	.....	.....	.....	58,466	.0099	74,612	.0115	80,037	0.225	62,656	.0098
47.	Total Repairs	319,724	.0389	250,532	.0277	166,334	.0281	188,980	.0290	177,099	.0498	169,730	.0265
48.	Miscellaneous Works Expense	88,767	.0108	90,444	.0100	63,959	.0108	65,233	.0100	37,393	.0105	64,327	.0101
49.	Gas Storage	1,644	.0002	1,809	.0002	1,222	.0002	1,323	.0002	616	.0002	1,334	.0002
50.	Total Cost of Gas in Holder	3,530,120	.4295	3,721,795	.4115	2,522,252	.4256	2,736,945	.4197	1,671,063	.4700	2,814,070	.4398

It was next necessary for me to ascertain the percentage of gas made at Astoria on each of the four plants. The figures used in computing the percentage appear in the following table:

Plant	Amount made, M cu. ft.	% of gas made at Astoria in 1923
Plant "A" coal gas	2,553,650	14.345
" "B" " "	2,799,702	15.728
" "C" Water gas	5,926,292	33.292
" "D" " "	6,521,542	36.635
	17,801,186	100.000

It appears from the foregoing table that of the coal-gas made at Astoria, 47.7% was made on Plant "A" and 52.30% was made on Plant "B".

It appearing that 16.03% of the total gas used on the System in the year 1923 consisted of coal gas, I next applied this percentage to the amount of gas that I estimated would have to be made on the nominal year beginning April 1, 1924. The amount of coal-gas thus ascertained to be made is 3,957,491.0 M cubic feet.

[fol. 4508] Operating on the same ratio that was found convenient by the Astoria company in 1923, 47.7% of 3,957,491 M cubic feet would be 1,887,723 M cubic feet, to be made on Plant "A", leaving 52.3%, or 2,069,768 M cubic feet, to be made on Plant "B".

I next ascertained the percentage of the water-gas made at Astoria that was produced on Plant "C", and arrived at 47.61%, leaving 52.39% to be made at "D" plant.

As before stated, 83.96% of the gas made in 1923 for the System consisted of water-gas, so I therefore applied the 83.97% to 24,688,027.7 M cubic feet—which is the amount of gas estimated to be made in the year beginning April 1, 1924—and thus arrived at the amount 20,730,536.7 M cubic feet.

On the same ratio of make as the Astoria company found it convenient to use in producing water-gas at Astoria in 1923, 47.61% of the water-gas to be made would be produced on Plant "C", or, in other words, 9,869,808.5 M cubic feet. This would leave to be made on Plant "D" 52.39% of the water gas, which would amount to 10,860,728.2 M cubic feet.

These figures may be checked by the following recapitulation table:

Recapitulation

Estimated Amount of Gas to be Made at Each of the Astoria Plants

	M cu. ft.	
Plant A, Inclined Retorts	1,887,723.0	Coal Gas
B, Horizontal Retorts	2,069,768.0	Coal Gas
C, Williamson House	9,869,808.5	Water Gas
D, Bartlett Hayward House	10,860,728.2	Water Gas
Total Make of Gas	24,688,027.7	

Having ascertained the amount of gas that would be made at each of the Astoria plants in the nominal year, assuming the same percentage of coal-gas and water-gas that was made in 1923 for the System and applying thereto the percentages of gas made at each of the plants at Astoria in 1923, I was able to prepare a table showing the cost of making gas at each of said plants, using for the individual costs the estimate of the necessary and reasonable expenditure for the nominal year as they appear on sheets 9a and 10 of this proposed exhibit. The figures referred to are as follows:

Estimated Cost of Producing Gas at Astoria

Estimate #1

	M cu. ft.	Amount	Per M feet
Plant A	1,887,723.0	$648,433	.3435
B	2,069,768.0	796,654	.3849
C	9,869,808.5	4,239,083	.4295
D	10,860,728.2	4,469,190	.4115
Totals & Average	24,688,027.7	10,153,360	.4113

[fol. 4509] In case it might be decided that Plant "B" is not efficient in operation, the figures and percentages I have heretofore given could be used by assuming that Plant "A" would make all of the coal-gas and plants "C" and

"D" would operate as heretofore stated. For that reason, I have set up another table of costs, as follows:

Estimated Cost of Producing Gas at Astoria

Estimate #2

	M cu. ft.	Amount	Per M feet
Plant A	3,957,491.0	$1,359,398	.3435
C	9,869,808.5	4,239,083	.4295
D	10,860,728.2	4,469,190	.4115
Totals & Average	24,688,027.7	10,067,671	.4078

It might further be decided that Plant "C" is not as efficient as Plant "D" and, therefore, I have set up another estimate of cost which shows all of the coal-gas made on Plant "A" and all of the water-gas made on plant "D" at Astoria, as follows:

	M cu. ft.	Amount	Per M feet
Plant A	3,957,491.0	$1,359,398	.3435
D	20,730,536.7	8,530,616	.4115
Totals & Average	24,688,027.7	9,890,014	.4006

If we ignore the percentage of water-gas and coal-gas put into the transfer System in 1923, and take it for granted that the Astoria company operated its four plants to the best advantage in 1923, it would be shown that of the 100% gas made in that year, 14.345% was made at Plant "A", 15.728% at Plant "B", 33.292% at Plant "C", and 36.635% at Plant "D".

If we apply these percentages to the amount of gas that I estimate will be made in the nominal year, we would arrive at the figures shown on the next table:

Plant	Amount made, M cu. ft., 1923	% of gas made at Astoria in '23	Amount to be made, M cu. ft., 1924-5
Plant A, Coal Gas	2,553,650	14.345	3,541,497.0
" B, " "	2,799,702	15.728	3,882,933.0
" C, Water Gas	5,926,292	33.292	8,219,138.1
" D, " "	6,521,542	36.635	9,044,459.0
	17,801,186	100.000	24,688,027.7

[fol. 4510] Using this basis for calculating the reasonable cost to produce gas in the nominal year, and taking as the unit cost the expense per M cubic feet shown on sheets 9a and 9b herein, we would arrive at the following figures:

Estimated Cost of Producing Gas at Astoria

	M cu. ft.	Amount	Cost per M feet
Plant A	3,541,497.6	$1,216,504	.3435
B	3,882,933.0	1,494,541	.3849
C	8,219,138.1	3,530,120	.4295
D	9,044,459.0	3,721,795	.4115
Totals & Average	24,688,027.7	9,962,960	.4036

(Here follow Defendants' Exhibits Nos. 100, 101, and 102, marked side folio pages 4511, 4512, and 4513)

[fol. 4514] DEFENDANTS' EXHIBIT No. 104

U. S. Department of Labor, Bureau of Labor Statistics,
Washington
EMT

July 16, 1924.

Mark Wolff & Associates, 50 Madison Ave., New York, N. Y.

DEAR SIRS: I am in receipt of your letter of the 15th instant, and in compliance with your request I am enclosing herewith mimeographed forms giving index numbers of wholesale prices by groups of commodities from January, 1900, to June, 1924.

Very truly yours, Chas. E. Baldwin, Acting Commissioner of Labor Statistics.

Enclosures.

[fol. 4515] For release morning papers July 16, 1924.
3196.

[fol. 4511]

DEFENDANTS' EXHIBIT No. 100

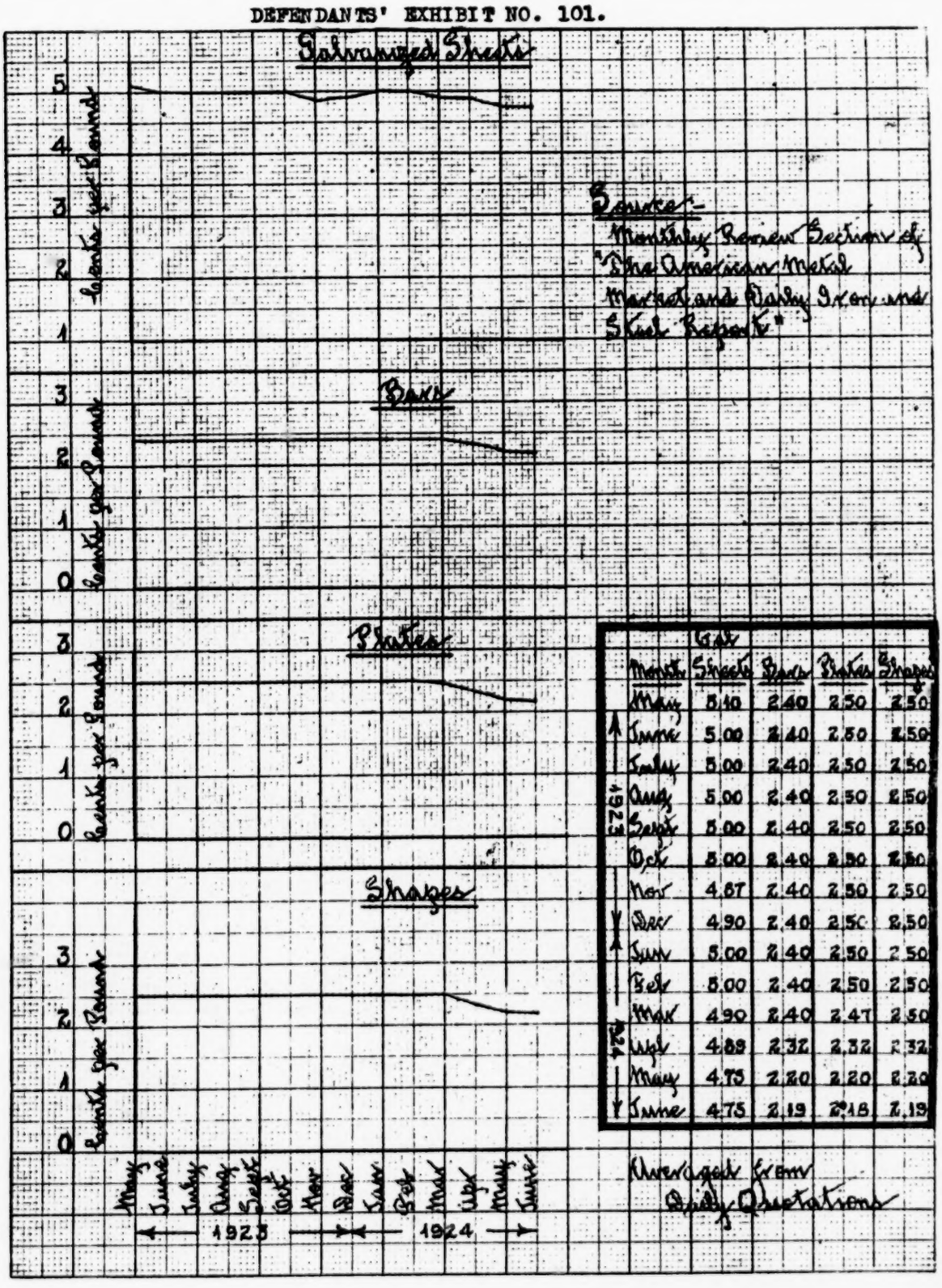
(A. S. B. Little, July 16, 1923)

Cost of Coal Gas Manufactured and Storage Expense, 14th Street Station, Compared with Astoria Plant

Year	M cu. ft. made	Labor	Materials	Repairs	Other	Residuals, credit	Net total	Cost per M produced	Cost at Astoria pl.	Cost per M prod.
1920....	74,522	$42,181.63	$78,009.97	$23,897.44	$47,368.25	$32,005.65	$159,451.64	$2.1397	$2,854,105.52	.6187
1919....	1,530	6,431.89	3,068.11	17,793.44	40,009.91	799.00	66,504.35	43.4669	1,943,376.46	.4379
1918....	18,872	11,815.59	21,311.38	12,240.43	31,697.17	8,709.95	68,354.62	3.6220	878,134.09	.2859
1917....	2,122	10,886.20	874.92	6,428.76	20,470.50	3,048.92	35,611.46	16.7820	582,878.37	1652
1916....	1,368	11,063.35	2,503.62	14,317.45	19,608.81	693.02	46,800.21	34.2106	530,215.78	.1748
				42nd Street Station Compared with Astoria Plant						
1920....	89,618	70,609.64	96,547.50	22,128.90	26,139.44	27,377.96	188,047.52	2.0983	2,854,105.52	.6187
1919....	1,837	3,069.92	2,816.18	7,741.99	16,821.48	758.44	29,691.13	16.1628	1,943,376.46	.4379
1918....	14,794	15,547.61	16,641.84	22,437.55	15,459.76	6,704.98	63,381.78	4.2843	878,134.09	.2859
1917....	1,742	10,438.19	814.50	7,529.93	4,578.10	529.17	22,831.55	13.1065	582,878.37	.1892
1916....	6,305	10,858.13	5,412.33	19,003.80	4,251.35	3,229.80	36,295.81	5.7567	530,215.78	.1748

Note—No coal gas made at either Station in 1921 or 1922.

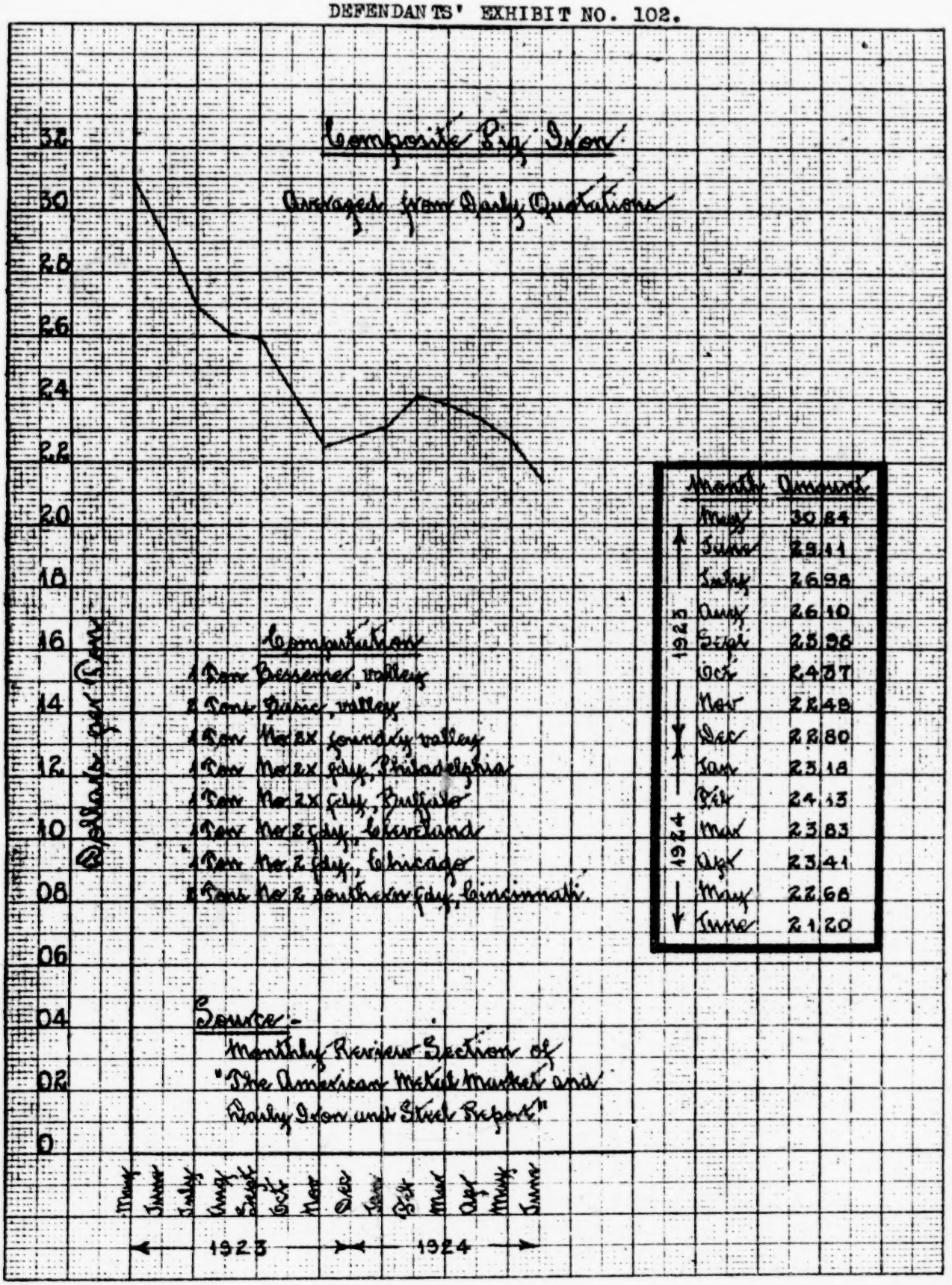
DEFENDANTS' EXHIBIT NO. 101.



	Month	Sheets	Bars	Plates	Shapes
1923	May	5.10	2.40	2.50	2.50
	June	5.00	2.40	2.50	2.50
	July	5.00	2.40	2.50	2.50
	Aug	5.00	2.40	2.50	2.50
	Sept	5.00	2.40	2.50	2.50
	Oct	5.00	2.40	2.50	2.50
	Nov	4.87	2.40	2.50	2.50
	Dec	4.90	2.40	2.50	2.50
1924	Jan	5.00	2.40	2.50	2.50
	Feb	5.00	2.40	2.50	2.50
	Mch	4.90	2.40	2.47	2.50
	Apr	4.88	2.32	2.32	2.32
	May	4.75	2.20	2.20	2.20
	June	4.75	2.19	2.18	2.19

Averages from Daily Quotations

DEFENDANTS' EXHIBIT NO. 102.



Months	Amounts
May	30.84
June	29.11
July	26.98
Aug	26.10
Sept	25.96
Oct	24.07
Nov	22.48
Dec	22.80
Jan	23.18
Feb	24.15
Mar	23.83
Apr	23.41
May	22.66
June	21.20

1923 1924

U. S. Department of Labor, Bureau of Labor Statistics, Washington

Wholesale Prices in June, 1924

A further recession in the general level of wholesale prices is shown for June by information gathered in representative markets by the United States Department of Labor through the Bureau of Labor Statistics. The Bureau's weighted index number, which includes 404 commodities or price series, sank to 144.6 for June, compared with 146.9 for May and 153.5 for June, 1923.

Decreases in building materials, farm products, and metals were chiefly responsible for the drop in the general price level, although all other groups except cloths and clothing likewise showed a decrease. Among building materials there were substantial reductions in lumber, structural steel, plate glass, and certain paint materials. In farm products there were decreases in live stock and poultry, cotton and cotton seed, hay, hides, tobacco, and wool. Other important commodities showing price decreases were pig iron, steel billets, steel plates, copper, lead, tin, coke, crude petroleum, leather, rubber, and wood pulp. In the food group increases in butter, eggs, and flour were offset by decreases in fresh meats and sugar, resulting in a slight net decrease in the group level.

Of the 404 commodities or price series for which comparable data for May and June were collected, decreases were shown in 137 instances and increases in 103 instances. In 164 instances no change in price was reported.

Index Numbers of Wholesale Prices by Groups of Commodities

(To show more minutely the fluctuations in the course of wholesale prices, all index numbers are here published to the fourth significant figure.)

(1913 = 100)

Group	June, 1923	1914	
		May	June
Farm products	137.6	136.4	134.0
Foods	142.0	136.6	135.6
Cloths and clothing	197.7	186.8	187.2
Fuel and lighting	186.1	177.3	174.7
Metals and metal products	147.9	134.5	132.2
Building materials	194.2	180.3	172.7
Chemicals and drugs	131.4	127.3	126.6
House furnishing goods	186.9	172.5	171.8
Miscellaneous	122.5	112.4	111.1
All commodities	153.5	146.9	144.6

Comparing prices in June with those of a year ago, as measured by changes in the index number, it is seen that the general level has declined almost 6 per cent. In all groups prices averaged lower than in June, 1923, ranging from 2½ per cent in the case of farm products to 10½ per cent in the case of metals and metal products and 11 per cent in the case of building materials.

Index Numbers of Wholesale Prices by Groups of Commodities and by Months

(1913 Equals 100)

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1900:										
Av. for year	70	79	88	76	108	81	102	87	104	81
January	69	79	91	82	118	84	103	87	108	82
February	69	78	91	82	118	84	103	87	109	82
March	69	77	91	83	118	84	103	88	109	82
April	70	75	91	80	119	85	103	88	110	82
May	68	75	89	77	115	83	102	88	110	81
June	69	77	88	73	110	82	101	88	100	80
July	71	80	88	73	103	80	101	86	100	80
August	71	81	86	73	102	79	102	86	100	80
September	73	82	86	73	99	79	102	85	101	80
October	72	82	84	71	96	79	103	86	103	79
November	73	82	86	70	98	80	103	86	100	80
December	73	82	84	70	99	79	103	85	97	79

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1901:										
Av. for year	74	79	81	73	103	78	105	87	96	79
January	74	80	83	72	98	78	103	87	97	79
February	71	78	82	73	99	78	102	87	96	78
March	71	77	82	73	102	78	102	87	95	78
April	70	77	81	72	103	78	102	87	95	78
May	70	76	80	69	104	76	102	87	98	78
June	70	75	80	69	103	77	102	87	96	78
July	72	77	80	70	102	78	102	87	95	78
August	74	79	80	73	104	78	106	87	95	79
September	76	79	81	73	105	77	108	88	97	81
October	77	79	81	74	104	80	104	87	96	80
November	77	81	81	78	104	80	112	87	94	81
December	81	84	81	77	104	79	112	87	95	83
1902:										
Av. for year	81	83	82	84	100	80	108	87	93	84
January	82	84	81	71	95	77	112	87	96	82
February	80	84	82	70	98	78	109	87	94	81
March	79	81	82	70	99	78	109	87	93	81
April	80	83	82	71	100	79	108	87	92	82

May	82	82	82	77	101	79	108	87	92	84
June	82	81	82	81	103	81	107	87	92	84
July	85	82	82	75	103	81	107	87	92	85
August	82	81	82	76	103	81	107	87	90	83
September	83	81	82	79	102	81	107	87	92	84
October	82	84	84	125	101	81	108	87	93	91
November	80	85	84	104	99	81	108	88	93	87
December	79	87	84	114	98	81	104	88	93	88

[fol. 4517]

1903:										
Av. for year	77	81	87	98	99	82	105	90	102	86
January	78	86	85	125	99	81	104	89	100	90
February	79	83	86	120	101	82	104	89	97	89
March	78	83	86	98	104	82	104	89	101	87
April	78	81	86	95	106	83	103	89	100	86
May	77	79	87	92	105	82	106	90	101	85
June	77	79	88	91	103	84	106	90	100	85
July	76	78	89	92	101	83	105	92	101	84
August	77	79	89	92	97	82	105	92	102	84
September	79	80	89	92	98	83	105	91	105	85
October	76	81	88	94	96	81	105	91	107	84
November	75	82	88	94	94	82	105	92	104	84
December	78	82	88	96	89	81	106	92	94	84

Index Numbers of Wholesale Prices—Continued

1904:										
Av. for year	81	84	88	87	88	79	105	89	110	86
January	81	83	89	97	88	81	106	91	101	86
February	84	85	91	95	88	80	106	91	104	87
March	83	83	90	92	88	80	106	91	106	87
April	81	81	90	87	90	79	106	91	109	85
May	79	79	88	85	90	79	105	91	110	84
June	79	80	87	85	88	79	105	91	110	84
July	79	81	86	83	87	79	105	89	110	84
August	80	83	86	83	86	80	105	89	114	85
September	82	85	86	83	85	79	104	88	113	86
October	82	86	87	84	85	78	105	88	111	86
November	83	91	87	85	89	79	101	88	112	87
December	80	92	87	86	94	79	105	88	119	88
1905:										
Av. for year	79	86	90	81	98	85	103	88	117	86
January	79	93	87	83	96	79	104	88	113	87
February	80	93	87	82	97	80	104	87	117	87
March	78	88	87	81	97	80	104	87	118	86
April	78	88	87	80	97	80	104	87	119	87
May	76	85	89	78	96	81	104	87	118	85
June	77	82	88	78	95	87	104	88	120	85
July	80	82	90	78	86	87	98	88	118	85

August	80	84	93	78	97	88	101	88	117	86
September .	78	83	94	79	99	88	102	89	118	85
October	78	82	94	84	101	88	102	89	117	86
November ..	80	83	95	84	102	90	102	90	114	86
December ..	81	85	86	86	106	91	102	90	115	87

[fol. 4518]

1906:										
Av. for year	80	83	98	85	113	95	96	91	116	89
January ...	80	83	98	85	109	92	96	90	118	88
February ..	79	82	97	85	108	93	96	90	118	87
March	78	81	97	84	108	92	95	90	117	87
April	80	80	97	86	108	92	95	89	117	88
May	80	79	98	85	108	97	95	89	117	88
June	80	80	97	84	110	96	95	90	117	88
July	72	81	98	85	110	97	95	91	115	86
August	78	82	98	85	110	96	95	91	115	88
September .	80	84	98	84	113	96	96	91	115	88
October	82	86	99	85	118	96	96	92	114	90
November ..	83	88	100	86	124	98	97	94	116	91
December ..	85	90	102	86	127	98	97	94	116	92

1907:										
Av. for year	87	89	105	89	121	100	98	98	111	94
January ...	83	87	103	96	129	100	97	95	116	92
February ..	85	87	103	86	132	101	97	95	115	93

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
March	83	85	104	87	132	102	97	96	116	92
April	83	84	105	88	131	102	96	97	115	93
May	86	85	105	83	132	103	97	97	115	94
June	87	86	106	88	130	103	98	98	112	95
July	88	87	106	88	127	103	98	99	110	95
August	90	89	106	89	118	101	99	99	111	95
September	91	91	107	89	114	101	99	99	110	95
October	93	95	105	93	105	97	99	99	110	96
November	87	95	104	93	102	96	99	99	106	93
December	86	93	102	90	100	95	98	99	99	91
1908:										
Av. for year	86	91	94	88	95	92	99	92	101	90
January	83	92	99	89	98	94	98	98	97	89
February	81	90	97	88	97	93	102	95	94	88
March	83	89	95	88	95	93	102	95	93	89
April	84	90	93	87	96	93	102	95	96	89
May	85	88	93	86	95	92	95	94	99	89
June	86	89	92	87	93	91	98	90	102	90
July	88	91	92	87	93	91	98	90	102	90
August	89	91	91	87	94	90	98	88	99	90

September .	89	92	92	87	95	91	99	88	102	91
October	88	94	93	88	94	90	99	88	105	91
November ..	90	95	94	88	95	91	99	89	108	92
December ..	91	97	94	88	96	92	99	89	115	93

[fol. 4519]

1909:

Av. for year	97	97	98	84	93	95	100	92	130	97
January ...	91	94	95	87	96	94	100	91	114	93
February ..	93	94	95	87	94	93	89	90	114	93
March	93	93	95	86	91	95	99	91	118	94
April	96	94	95	85	89	95	99	91	115	95
May	99	96	95	85	89	93	98	91	118	97
June	99	96	96	84	90	93	99	91	123	97
July.....	99	96	98	84	91	95	99	91	128	97
August	97	96	99	82	92	97	99	91	149	98
September .	99	99	99	82	94	97	100	92	142	99
October	101	101	101	84	96	94	101	92	155	101
November ..	104	104	102	83	96	94	102	94	147	102
December ..	107	105	101	83	98	95	101	94	142	103

1910:

Av. for year	103	101	100	78	94	98	102	96	151	101
January ...	106	105	102	81	99	97	102	95	142	102
February ..	106	101	102	80	99	97	102	95	146	102

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
March	108	103	101	80	97	97	102	95	156	105
April	105	102	100	79	96	98	103	96	185	105
May	103	99	100	78	94	98	101	95	186	103
June	102	97	99	78	93	98	101	95	171	102
July	104	100	98	76	92	98	101	95	168	102
August	105	102	98	76	91	97	102	96	159	102
September	103	103	98	77	91	97	103	96	145	100
October	101	101	99	75	91	97	104	96	124	97
November	97	100	100	76	91	99	103	96	115	95
December	97	100	100	77	91	98	103	96	117	96
1911:										
Av. for year	93	97	96	76	89	98	102	93	111	93
January	96	98	98	77	91	98	103	96	113	95
February	91	94	98	77	90	99	103	96	115	92
March	89	91	98	77	91	99	102	96	134	93
April	88	88	97	76	90	99	101	95	123	91
May	88	88	97	76	90	99	101	93	112	90
June	90	90	96	76	88	98	100	93	103	90
July	93	93	96	76	89	98	101	92	102	92
August	95	98	95	76	89	97	102	93	108	94

September .	95	102	95	76	89	97	102	93	110	95
October	95	105	93	76	87	96	103	91	109	95
November .	96	107	93	76	86	96	102	91	103	95
December ..	96	104	93	76	88	95	101	91	103	94

[fol. 4520]

1912:										
Av. for year	101	104	97	84	99	99	101	94	110	99
January	96	105	93	78	90	96	101	92	105	95
February ..	97	104	93	81	90	96	101	92	109	96
March	99	102	95	81	91	97	100	92	111	97
April	103	103	96	86	94	98	100	93	114	100
May	105	103	97	84	95	98	101	94	113	100
June	101	102	97	83	97	98	101	94	110	99
July	101	101	98	84	100	99	100	95	108	99
August	103	103	99	83	101	99	100	95	110	100
September .	104	104	99	84	103	100	101	95	115	101
October	104	107	100	85	107	100	101	95	111	101
November ..	103	107	100	87	107	101	101	96	102	101
December ..	101	105	101	91	107	100	101	96	102	101

[fol. 4521] U. S. Department of Labor, Bureau of Labor Statistics, Washington

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Index Numbers of Wholesale Prices by Groups of Commodities and by Months

(1913 equals 100)

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1913:										
Av. for year	100	100	100	100	100	100	100	100	100	100
January	98	99	99	100	107	101	100	100	106	100
February ...	98	98	100	101	105	102	101	100	105	100
March	98	98	100	101	105	103	101	100	103	100
April	99	98	100	98	104	103	101	100	100	100
May	97	97	100	98	103	103	100	100	98	99
June	98	99	100	98	101	102	100	100	100	99
July	99	101	100	99	98	99	100	100	100	100
August	100	102	100	101	98	99	100	100	98	100
September .	103	103	101	101	98	99	100	100	100	102
October	103	102	101	102	97	98	100	101	98	101
November ..	103	103	101	102	94	97	100	100	97	100
December ..	102	101	100	99	89	96	98	100	96	99

1914:										
Av. for year.	103	102	98	93	85	92	101	100	95	98
January ...	103	101	99	99	88	93	98	100	94	98
February ..	103	100	99	99	89	94	98	100	96	99
March	102	98	99	100	89	94	98	100	98	98
April	102	95	99	98	88	93	97	100	98	98
May	101	96	99	95	85	93	97	100	99	97
June	101	97	99	91	84	93	96	100	95	97
July	103	99	99	91	83	92	95	100	93	97
August	106	109	99	89	84	93	96	100	94	101
September .	106	111	97	89	86	92	109	100	96	102
October	101	106	96	88	83	90	108	100	92	97
November ..	102	106	94	88	80	88	107	100	91	97
December ..	101	105	94	88	81	88	107	100	96	97
1915:										
Av. for year.	104	105	98	88	99	94	134	100	95	101
January ...	104	106	94	87	82	88	108	99	99	98
March	104	106	95	86	86	89	116	99	93	99
March	105	106	95	84	88	90	118	99	93	99
April	104	105	96	82	90	90	118	99	93	99
May	105	105	96	82	96	93	116	100	93	100
June	101	102	96	81	102	93	123	100	93	99
July	104	104	96	81	105	94	130	100	94	100
August	103	102	97	85	103	93	136	100	93	100

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
September .	101	99	99	91	104	94	143	100	92	100
October	106	102	101	94	105	98	151	100	93	102
November ..	104	106	105	98	110	101	165	100	95	104
December ..	105	108	107	103	122	104	179	101	100	108
[fol. 4522]										
1916:										
Av. for year.	123	121	127	126	162	120	181	106	121	127
January ...	110	109	110	113	133	110	184	103	110	113
February ..	110	110	114	115	142	113	204	103	105	115
March	111	112	117	119	156	118	206	104	108	119
April	113	114	118	120	164	120	200	104	110	121
May	115	115	120	120	168	121	193	105	114	122
June	114	115	122	122	164	120	191	105	120	123
July	117	117	125	121	158	120	175	107	120	123
August	125	122	128	116	157	120	157	107	121	126
September .	131	126	130	120	160	121	158	107	124	130
October	136	134	137	128	164	124	164	109	132	136
November ..	147	141	147	155	174	126	167	111	139	146
December ..	146	137	154	163	199	132	172	111	147	149

1917:										
Av. for year.	190	167	175	169	231	157	202	125	148	177
January	152	140	158	171	198	138	173	118	149	153
February	157	145	157	178	204	140	173	119	150	157
March	166	148	158	174	218	144	181	120	151	162
April	184	164	164	164	230	155	186	121	153	173
May	196	175	167	178	240	159	194	121	151	183
June	195	171	174	183	267	169	195	123	153	185
July	196	169	181	176	292	168	205	129	153	188
August	202	175	186	167	282	167	211	129	150	189
September	202	176	185	160	260	167	223	130	147	187
October	207	180	185	153	207	156	231	130	142	183
November	212	181	191	161	183	156	223	131	140	183
December	207	181	195	163	183	158	228	133	140	182
1918:										
Av. for year.	218	188	228	170	187	172	215	153	156	194
January	211	182	201	164	183	161	223	137	145	184
February	211	183	205	164	184	161	227	138	145	186
March	211	179	211	165	184	164	229	140	147	187
April	213	181	220	166	184	169	228	144	152	190
May	209	180	226	169	185	170	222	146	155	190
June	210	180	233	169	184	172	205	152	160	191
July	217	185	238	175	189	177	209	159	159	196
August	227	189	239	175	190	179	212	161	160	200

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
September	234	195	245	176	190	179	210	163	161	204
October	225	198	245	176	192	177	211	164	163	202
November	225	204	241	179	191	177	209	164	164	203
December	227	206	233	179	187	177	194	163	163	202
[fol. 4523]										
1919:										
Av. for year.	231	207	253	181	162	201	169	184	175	206
January	224	203	220	178	175	176	181	167	166	199
February	216	194	210	178	170	173	169	165	163	193
March	224	199	203	178	163	171	162	164	161	196
April	230	205	205	177	153	169	160	167	160	199
May	234	210	216	178	153	173	161	168	161	202
June	226	204	243	180	154	189	162	180	167	203
July	241	210	262	181	160	209	167	183	177	212
August	242	214	276	184	162	226	170	188	187	216
September	225	205	283	188	161	229	170	190	189	210
October	227	205	291	189	162	229	173	194	187	211
November	237	210	304	188	164	232	176	217	189	217
December	242	220	317	189	168	248	182	222	189	223

1920:										
Av. for year.	218	220	295	241	192	264	200	254	196	226
January	247	231	339	194	175	274	189	239	194	233
February	237	222	346	199	190	293	195	242	197	232
March	237	220	344	208	197	297	205	242	200	234
April	243	238	336	231	203	300	210	242	206	245
May	241	248	328	239	202	293	213	247	208	247
June	237	243	314	250	200	275	212	248	205	243
July	233	238	300	259	202	269	212	275	203	241
August	218	221	286	269	202	265	209	274	199	231
September	210	215	266	281	200	255	205	273	195	226
October	187	201	245	280	191	240	198	271	188	211
November	173	190	226	264	176	215	181	260	179	196
December	152	170	215	254	160	204	164	242	166	179
1921:										
Av. for year.	124	144	180	199	129	165	136	195	128	147
January	143	162	196	247	153	192	153	217	154	170
February	133	151	188	225	147	180	149	217	147	160
March	127	151	183	212	140	173	143	216	139	155
April	117	144	176	205	138	167	135	216	130	148
May	118	139	173	200	138	165	134	209	126	145
June	114	137	172	191	133	163	133	196	125	142
July	119	141	172	186	124	160	129	180	123	141
August	123	146	171	184	117	156	129	179	119	142

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
September	124	142	178	181	116	156	131	179	118	141
October	124	140	180	189	116	159	131	180	118	142
November	121	139	180	197	114	163	129	178	119	141
December	120	136	180	199	113	158	127	178	121	140
[fol. 4524]										
1922:										
Av. for year.	133	138	181	218	122	168	124	176	117	149
January	122	131	176	195	112	157	124	178	117	138
February	131	135	174	191	110	156	123	177	117	141
March	130	137	172	191	109	155	125	175	117	142
April	129	137	171	194	113	156	124	175	116	143
May	132	138	175	216	119	160	122	176	116	148
June	131	140	179	225	120	167	122	176	114	150
July	135	142	180	254	121	170	121	173	114	155
August	131	138	181	271	126	172	122	173	115	155
September	133	138	183	244	134	180	124	173	116	153
October	138	140	188	226	135	183	124	176	120	154
November	143	143	192	218	133	185	127	179	122	156
December	145	144	194	216	131	185	130	182	122	156

1923:										
Av. for year.	141	144	200	185	144	189	131	183	123	154
January	143	141	196	218	133	188	131	184	124	156
February	142	141	199	212	139	192	132	184	126	157
March	143	143	201	206	149	198	135	185	127	159
April	141	144	205	200	154	204	136	187	126	159
May	139	144	201	190	152	202	134	187	125	156
June	138	142	198	186	148	194	131	187	123	153
July	135	141	193	183	145	190	128	187	121	151
August	139	142	193	178	145	186	127	183	120	150
September	144	147	202	176	144	182	128	183	121	154
October	144	148	199	172	142	182	129	183	120	153
November	146	148	201	167	141	181	130	176	118	152
December	145	147	203	162	142	178	130	176	116	151
1924:										
Av. for year.	...	...	...	...	...	...	...	...	...	...
January	144	143	200	169	142	181	132	176	117	151
February	143	143	196	180	143	182	131	176	113	152
March	137	141	191	181	144	182	130	175	113	150
April	139	137	189	179	139	182	128	175	113	148
May	136	137	187	177	134	180	127	173	112	147
June	...	...	...	...	...	...	...	...	...	...
July	...	...	...	...	...	...	...	...	...	...

Index Numbers of Wholesale Prices—Continued

Year and month	Farm products	Foods	Cloths and clothing	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
August	...	...	...	...	...	...	...	...	...	...
September	...	...	...	...	...	...	...	...	...	...
October	...	...	...	...	...	...	...	...	...	...
November	...	...	...	...	...	...	...	...	...	...
December	...	...	...	...	...	...	...	...	...	...

(Here follows side folio page 4525)

DEFENDANTS' EXHIBIT No. 105

Consolidated Gas Company of New York

Summary of Appendix "B"—Bureau of Labor Statistics—Bulletin 335, Showing Number of Commodities and Part of Country from which Quotations were Selected and Relative Weights Given

Locality	Fuel & Lighting			Metals and Metal Products			Building Material			All other Sub-Groups (a)			All Commodities		
	% of		No. of commodities	% of		No. of commodities	% of		No. of commodities	% of		No. of commodities	% of		No. of commodities
	Group	All		Group	All		Group	All		Group	All		Group	All	
New York	38.25	6.64	8	11.69	.89	9	14.43	.68	9—3 (d)	248.45	23.10	120— 8 (b) 3 (c)	312.82	31.31	146— 8 (b) 3 (c) 3 (d)
Chicago	16.63	2.89	3	1.02	.08	1	6.68	.42	3	96.07	21.59	51— 1 (b) 4 (c)	120.40	24.98	58— 1 (b) 3 (d) 4 (c)
Pittsburgh	7.78	1.35	1	54.58	4.16	17	7.95	(d)	4 (d)				70.31	5.51	18— 4 (d)
Boston							1.67	.10	1	44.92	4.59	24— 1 (c)	46.59	4.69	25— 1 (c)
Philadelphia				.57	.04	1				10.39	1.02	9— 2 (c)	10.96	1.06	10— 2 (c)
Kansas City										9.60	2.54	4	9.60	2.54	4
Minneapolis										12.31	2.20	7	12.31	2.20	7
Cincinnati	8.18	1.42	2				10.62	.66	2	4.69	.51	5— 2 (b) 1 (c)	23.49	2.59	9— 2 (b) 1 (c)
New Orleans										11.36	2.83	7— 3 (c)	11.36	2.83	7— 3 (c)
Norfolk, Va.	6.39	1.11	1							.38	.10	1	6.77	1.21	2
Pacific Coast (e)										8.74	1.10	11— 2 (c)	8.74	1.10	11— 2 (c)
Louisville										4.99	1.34	1	4.99	1.34	1
St. Louis							2.05	.13	1	1.10	.28	3	3.15	.41	4
Sundry (f)	7.09	1.23	1	14.58	1.11	4	5.70	.35	1	.87	.22	3	28.24	2.91	9
General	15.68	2.73	4	15.08	1.14	3	16.79	1.03	8	4.86	.72	3	52.41	5.62	18
Mill				2.14	.16	1	33.69	1.91	7—1 (d)	7.71	.53	3	43.54	2.60	11— 1 (d)
Factory				.34	.03	1	.42	(d)	1 (d)	133.56	7.07	49— 3 (b)	134.32	7.10	50— 3 (b) 1 (d)
	100.00	17.37	20	100.00	7.61	37	100.00	5.28	32—9 (d)	600.00	69.74	301—14 (b) 16 (c)	900.00	100.00	390—14 (b) 16 (c) 9 (d)

For explanation of notes (a), (b), (c), (d), (e) and (f) refer to Table 300, Sheet No. 2

[fol. 4526] DEFENDANTS' EXHIBIT No. 106

Consolidated Gas Company of New York

Summary of Appendix "B"—Bureau of Labor Statistics—Bulletin 335, Showing Number of Commodities and Part of Country from which Quotations were Selected and Relative Weights Given

Notes

(a) "All Other Sub-Groups" Includes:

	No. of commodities	% of all commodities
Farm Products	56	26.80
Foods	111	22.19
Cloths & Clothing	65	9.48
Chemicals & Drugs	43	1.67
House Furnishings	31	3.35
Miscellaneous	25	6.25

(b) Less than 1/100th of 1%, not included in "All Commodities," index number although considered.

(c) Included under Farm Products.

(d) Included in "Metals and Metal Products."

(e) Includes "Portland, Oregon," and "San Francisco" quotations.

(f) Includes "Toledo," "Decatur," "Gloucester," "Indianapolis," "Birmingham," "Buffalo," each 1 quotation and Lake ports 2 quotations.

[fol. 4527] DEFENDANTS' EXHIBIT No. 112

Iron and Steel Statistics

Imports of Iron Ore into the United States

	1924	1923	1922	1921
Jan.	114,599	205,532	19,433	82,424
Feb.	115,039	143,702	10,016	47,466
Mar.	231,343	166,626	12,013	26,483
April	149,815	171,459	2,710	35,645
May	.....	263,792	29,707	58,704
June	.....	277,380	133,817	8,424
July	.....	439,367	166,711	7,040
Aug.	.....	267,677	171,142	24,570
Sept.	.....	261,609	138,388	4,954
Oct.	.....	236,442	*123,407	5,838
Nov.	.....	77,654	160,141	12,065
Dec.	.....	157,190	167,221	2,155

Yearly totals:

1923	2,768,430
1922	1,135,156
1921	315,768
1920	1,273,456
1919	476,461
1918	787,468
1917	971,663
1916	1,325,736
1915	1,341,281
1914	1,350,588
1913	2,594,770
1912	2,104,576

*September 22 to October 31.

Steel Making Pig Iron Averages

Bessemer and basic pig iron averages compiled by Messrs. W. P. Snyder & Company from sales in the valley market of 1,000 tons and over.

	Bessemer			Basic		
	1924	1923	1922	1924	1923	1922
Jan.	23.00	27.50	19.50	22.00	25.58	18.19
Feb.	23.50	28.02	19.50	22.00	26.38	17.75
Mar.	23.38	30.26	19.39	22.00	30.02	18.00
Apr.	22.80	31.00	20.54	21.50	31.00	19.30
May	22.13	30.10	24.40	20.32	28.06	24.91
June	21.14	28.50	25.00	19.73	26.57	25.00
July	....	26.70	25.00	....	24.75	24.56
Aug.	....	26.50	28.67	....	25.00	25.41
Sept.	....	26.50	33.50	....	24.50	32.93
Oct.	....	25.20	33.50	....	23.25	30.00
Nov.	....	23.03	31.75	....	20.81	27.60
Dec.	....	22.78	28.10	....	20.86	24.57
Year	....	27.17	25.75	....	25.56	24.02

All prices are f. o. b. valley furnace; freight to Pittsburgh or Cleveland, $1.76.

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Finished Steel Prices

(Averaged From Daily Quotations, f. o. b. Pittsburgh)

	Shapes	Plates	Bars	Pipe	Wire	Wire nails	Grooved steel skelp	Sheets: Black	Sheets: Galv.	Sheets: Blue annld.	Sheets: Tin plate	Comp. fin. steel
Jan. 1922	1.50	1.50	1.50	71	2.25	2.50	1.50	3.00	4.00	2.25	4.75	2.16
Feb.	1.46	1.46	1.46	71	2.22	2.47	1.46	3.00	4.00	2.25	4.75	2.14
Mar.	1.41	1.39	1.41	71	2.25	2.40	1.40	3.00	4.00	2.25	4.61	2.09
April	1.50	1.49	1.50	71	2.25	2.40	1.50	3.12	4.12	2.37	4.66	2.16
May	1.52	1.52	1.55	71	2.25	2.40	1.55	3.15	4.15	2.40	4.72	2.18
June	1.60	1.60	1.60	71	2.25	2.40	1.60	3.15	4.15	2.40	4.75	2.22
July	1.62	1.62	1.62	71	2.25	2.40	1.62	3.15	4.15	2.40	4.75	2.23
Aug.	1.82	1.82	1.80	70⅛	2.26	2.41	1.80	3.27	4.27	2.46	4.75	2.36
Sept.	2.00	2.00	1.92	68	2.37	2.62	2.10	3.35	4.35	2.60	4.75	2.51
Oct.	2.00	2.08	2.00	66⅞	2.45	2.70	2.05	3.35	4.35	2.70	4.75	2.57
Nov.	2.00	2.00	2.00	66	2.45	2.70	2.00	3.35	4.35	2.55	4.75	2.57
Dec.	2.00	2.00	2.00	66	2.45	2.70	2.00	3.35	4.35	2.50	4.75	2.57
Jan. 1923	2.04	2.04	2.00	66	2.49	2.70	2.00	3.35	4.35	2.50	4.75	2.59
Feb.	2.16	2.18	2.16	64¼	2.61	2.80	2.16	3.40	4.49	2.55	4.78	2.72
Mar.	2.29	2.29	2.25	64	2.70	2.82	2.30	3.63	5.00	2.95	5.09	2.83
April	2.46	2.46	2.36	63¼	2.70	2.94	2.40	3.97	5.20	3.20	5.50	2.99
May	2.50	2.50	2.40	62⅝	2.75	3.00	2.42	3.85	5.10	3.15	5.50	3.03
June	2.50	2.50	2.40	62	2.75	3.00	2.40	3.85	5.00	3.10	5.50	3.03
July	2.50	2.50	2.40	62	2.75	3.00	2.40	3.85	5.00	3.00	5.50	3.03

Aug.	2.50	2.50	2.40	62	2.75	3.00	2.40	3.85	5.00	3.00	5.50	3.03
Sept.	2.50	2.50	2.40	62	2.75	3.00	2.40	3.85	5.00	3.00	5.50	3.03
Oct.	2.50	2.50	2.40	62	2.75	3.00	2.40	3.80	5.00	3.00	5.50	3.02
Nov.	2.50	2.50	2.40	62	2.75	3.00	2.40	3.75	4.87	3.00	5.50	3.02
Dec.	2.50	2.50	2.40	62	2.75	3.00	2.40	3.77	4.90	3.00	5.50	3.02
Jan. 1924	2.50	2.50	2.40	62	2.75	3.00	2.40	3.85	5.00	3.00	5.50	3.03
Feb.	2.50	2.50	2.40	62	2.75	3.00	2.40	3.85	5.00	3.00	5.50	3.03
Mar.	2.50	2.47	2.40	62	2.75	3.00	2.35	3.75	4.90	2.95	5.50	3.00
April	2.32	2.32	2.32	62	2.75	3.00	2.30	3.72	4.89	2.85	5.50	2.94
May	2.20	2.20	2.20	62	3.70	2.95	2.25	3.64	4.75	2.75	5.50	2.86
June	2.19	2.18	2.19	62	2.65	2.80	2.20	3.60	4.75	2.75	5.50	2.84
Yearly averages:												
1918	2.99	3.24	2.89	51⅛	3.25	3.50	2.89	4.98	6.24	4.23	7.73	3.79
1919	2.53	2.71	2.43	56¾	3.06	3.31	2.51	4.43	5.78	3.63	7.08	3.32
1920	2.99	3.20	2.99	55⅝	3.40	3.67	3.00	5.85	7.39	5.06	7.29	3.63
1921	1.97	1.96	1.89	63¾	2.77	2.98	1.96	3.54	4.57	2.74	5.83	2.69
1922	1.70	1.71	1.70	69½	2.31	2.51	1.72	3.19	4.19	2.43	4.73	2.31
1923	2.41	2.41	2.33	62¾	2.71	2.94	2.34	3.74	4.91	2.95	5.34	2.95

Pig Iron Prices

(Averaged from daily quotations: at Philadelphia, Buffalo, Cleveland and Chicago, prices are delivered)

	Bessemer	Basic Valley	No. 2 fdy.	Basic Phila.	No. 2X Phila.	No. 2X foundry Buffalo	No. 2 fdy. Cleveland	No. 2 fdy. Chicago	No. 2 fdy. Birmingham	Ferro-manganese*	Comp. pig iron
Jan. 1923	27.50	25.00	27.00	27.90	28.72	27.44	27.83	29.09	23.23	103.00‡	27.31
Feb.	27.75	25.67	27.21	28.25	29.79	28.52	28.42	30.13	24.29	106.00‡	27.98
Mar.	29.94	29.44	30.00	29.17	31.86	29.40	31.31	31.46	26.33	117.00‡	30.26
April	31.00	31.00	31.00	30.50	33.01	30.17	32.50	32.61	27.00	116.50‡	31.44
May	30.23	29.33	30.69	30.85	32.64	29.29	32.13	32.61	27.00	123.00‡	30.84
June	28.73	26.85	28.04	28.20	30.47	28.87	29.85	32.11	25.63	125.00‡	29.11
July	26.82	25.11	25.70	26.45	27.80	25.11	27.32	28.71	25.00	120.00‡	26.98
Aug.	26.50	25.00	25.00	25.00	25.50	24.75	26.77	27.65	23.31	117.50‡	26.10
Sept.	26.50	24.92	24.96	24.50	26.03	24.65	26.71	27.36	22.81	112.00‡	25.98
Oct.	25.33	24.00	23.76	24.00	24.33	22.87	25.31	25.76	20.11	109.00‡	24.37
Nov.	23.82	21.20	21.84	22.49	22.55	20.97	23.60	23.59	19.04	107.50‡	22.49
Dec.	23.00	20.96	21.96	22.90	24.24	21.93	23.51	23.61	20.36	107.50‡	22.80
Jan. 1924	23.00	21.12	21.12	22.93	24.23	22.60	22.73	24.23	21.27	108.75‡	23.18
Feb.	23.72	22.62	23.30	22.55	23.73	22.65	24.50	25.01	22.52	107.50‡	24.13
Mar.	23.29	22.00	23.00	21.88	23.63	21.83	24.50	24.92	22.50	107.50‡	23.83
April	22.87	21.54	22.04	21.50	23.29	21.60	23.85	24.61	22.35	107.50‡	23.41
May	22.25	20.73	21.15	21.12	22.73	20.63	22.98	23.49	21.46	107.50‡	22.57
June	21.32	19.48	19.72	21.00	21.61	19.19	21.52	21.79	19.88	107.50‡	21.20

Yearly averages:

1919	29.62	27.49	28.63	30.02	32.75	30.53	29.14	29.37	28.34	132.16	29.91
1920	42.85	42.05	43.25	43.26	46.74	45.23	43.66	43.25	40.43	172.33	43.00
1921	23.49	21.87	23.30	23.56	24.74	23.78	24.34	24.05	21.92	76.54	24.05
1922	25.68	23.98	25.04	24.88	27.07	25.04	25.93	25.31	19.72	75.33	25.00
1923	27.26	25.71	26.43	26.68	28.08	26.16	27.85	28.72	23.68	113.67‡	27.14

*Delivered.
†Seaboard.
‡F. o. b. furnace.

British Iron and Steel Output

Pig Iron—(Gross tons)

	1924	1923	1922	1921
Jan.	631,500	567,900	288,000	642,100
Feb.	612,700	543,400	300,100	463,600
Mar.	668,600	633,600	389,800	386,000
Apr.	618,400	652,200	394,300	60,300
May	650,900	714,200	407,900	13,600
June	.....	692,900	369,200	800
July	.....	655,100	399,100	10,200
Aug.	.....	599,800	411,700	94,200
Sept.	.....	558,600	430,300	158,300
Oct.	.....	592,600	481,500	235,500
Nov.	.....	597,600	493,900	271,800
Dec.	.....	626,900	533,700	275,000
Total	.....	7,434,800	4,899,500	2,611,400

Steel Ingots and Castings

	1924	1923	1922	1921
Jan.	690,100	624,300	327,500	493,400
Feb.	767,600	707,100	418,800	483,500
Mar.	825,200	802,500	549,400	359,100
Apr.	711,500	749,400	404,200	70,600
May	809,700	821,000	462,300	5,700
June	.....	767,700	400,200	2,700
July	.....	624,300	473,100	117,200
Aug.	.....	582,700	520,800	434,100
Sept.	.....	695,100	555,900	429,300
Oct.	.....	702,100	565,200	405,400
Nov.	.....	749,500	600,800	442,800
Dec.	.....	653,300	546,100	381,000
Total	.....	8,479,000	5,831,900	3,624,800

[fol. 4528] Composite Pig Iron

Computation for June 30, 1924

One ton Bessemer, valley	$20.50
Two tons basic, valley ($19.00)	38.00
One ton No. 2x foundry, valley	19.00
One ton No. 2x, fdy., Philadelphia	21.26
One ton No. 2x fdy., Buffalo	18.75
One ton No. 2 foundry, Cleveland	20.76
One ton No. 2 foundry, Chicago	20.11
Two tons No. 2 southern foundry, Cincinnati (23.05)	46.10
Total, ten tons	205.48
One ton	20.548

Averaged from Daily Quotations

	1924	1923	1922	1921	1920	1919
Jan.	23.18	27.31	19.71	32.62	39.84	32.39
Feb.	23.13	27.98	19.31	20.95	42.72	32.39
Mar.	23.83	30.36	19.26	27.35	43.05	30.47
Apr.	23.41	31.44	20.77	25.80	43.62	28.05
May	22.68	30.84	23.91	24.67	44.43	27.74
June	21.20	29.11	24.29	23.08	44.80	27.15
July		26.98	24.54	21.57	45.60	27.66
Aug.		26.10	27.74	20.29	47.41	27.99
Sept.		25.98	32.48	20.99	48.98	28.26
Oct.		24.37	31.82	21.15	47.07	28.65
Nov.		22.49	29.47	20.92	41.80	31.48
Dec.		22.80	26.73	20.42	36.31	36.73
Year		27.15	25.00	24.05	43.80	29.91

Composite Steel

Computation for June 30, 1924

Pounds	Group	Av. price	Extension
2½	Bars	2.15	5.375
1½	Plates	2.15	3.225
1½	Shapes	2.15	3.225
1½	Pipe (1-3)	3.80	5.700
1½	Wire nails	2.90	4.350
1	Sheets (28 ga.)	3.60	3.600
½	Tin plate	5.50	2.750
	Total, ten pounds		28.225
	One pound		2.8225

Averaged from daily quotations

	1924	1923	1922	1921	1920	1919
Jan.	3.03	2.59	2.16	3.25	3.35	3.58
Feb.	3.03	2.72	2.14	3.10	3.58	3.58
Mar.	3.00	2.83	2.09	2.94	3.78	3.47
Apr.	2.94	2.99	2.16	2.93	3.77	3.25
May	2.86	3.03	2.18	2.93	3.71	3.25
June	2.84	3.03	2.22	2.83	3.67	3.25
July	....	3.03	2.23	2.63	3.70	3.25
Aug.	....	3.03	2.36	2.48	3.80	3.25
Sept.	....	3.03	2.51	2.37	3.80	3.22
Oct.	....	3.02	2.57	2.31	3.67	3.23
Nov.	....	3.02	2.57	2.28	3.50	3.25
Dec.	....	3.02	2.57	2.23	3.28	3.25
Av.	....	2.95	2.31	2.69	3.63	3.32

Iron and Steel Statistics

Steel Corporation Bookings

Changes in unfilled tonnage with shipments and bookings estimated in percentage of capacity

1922	Shipments	Bookings	Difference	Difference
April	70	115	+45	+602,769
May	75	86	+11	+157,311
June	75	103	+28	+381,303
July	75	86	+11	+140,630
Aug.	67	79	+12	+173,944
Sept.	67	121	+54	+741,502
Oct.	76	91	+15	+210,680
Nov.	81	76	— 5	— 62,045
Dec.	80	73	— 7	— 94,539
Jan. 1923	86	97	+11	+165,073
Feb.	88	117	+29	+373,213
Mar.	89	97	+ 8	+119,343
April	93	84	— 9	—114,823
May	93	72	—21	—307,158
June	92	49	—43	—595,090
July	89	53	—36	—475,498
Aug.	87	52	—35	—496,100
Sept.	87	58	—29	—378,913
Oct.	90	65	—25	—362,925
Nov.	82	60	—22	—304,241
Dec.	78	84	+ 6	+ 76,755
Jan. 1924	82	107	+25	+353,090
Feb.	92	101	+ 9	+114,472
Mar.	95	86	— 9	—130,004
April	80	39	—41	—574,360
May	71	29	—42	—580,358

Unfilled Orders

At end of the quarter, last three figures omitted

	First	Second	Third	Fourth
1913	7,468	5,807	5,003	4,282
1914	4,653	4,032	3,787	3,836
1915	4,255	4,678	5,317	7,806
1916	9,331	9,640	9,522	11,547
1917	11,711	11,383	9,833	9,381
1918	9,056	8,918	8,297	7,379
1919	5,430	4,892	6,284	8,265
1920	9,892	10,978	10,374	8,148
1921	6,284	5,117	4,560	4,268
1922	4,494	5,635	6,691	6,746
1923	7,403	6,386	5,036	4,445
1924	4,783	....	....	....

Exports of Iron and Steel Products from the U. S.

Value of tonnage and non-tonnage

	*1924	*1923	*1922
Jan.	$28,644,840	$14,866,090	$15,141,083
Feb.	19,708,217	14,865,590	12,950,603
Mar.	17,493,058	14,543,155	18,836,718
Apr.	17,832,432	20,146,346	17,549,618
May	.....	22,681,660	17,749,475
June	.....	21,242,193	18,649,816
July	.....	21,582,626	14,611,885
Aug.	.....	19,402,293	13,963,749
Sept.	.....	19,871,060	14,380,851
Oct.	.....	19,244,049	14,626,411
Nov.	.....	21,787,744	14,248,464
Dec.	.....	21,705,600	16,668,116
1923	.....	.....	$234,355,360
1922	.....	.....	188,841,433
1921	.....	.....	607,427,146
1920	.....	.....	1,112,904,802
1919	.....	.....	968,575,142
1918	.....	.....	1,035,291,736

*Excluding machinery.

	*1924	*1923	*1922
1917			1,240,984,979
1916			871,372,322
1915			390,897,123
1914			199,861,684
1919			293,934,160
1912			289,128,420

Tonnage Lines

(Gross tons)

	1924	1923	1922	1921
Jan.	247,942	123,190	160,920	547,394
Feb.	164,820	133,902	133,975	393,328
Mar.	123,618	163,920	208,843	230,635
Apr.	131,276	177,471	198,830	162,592
May		203,389	230,062	104,072
June		171,183	212,295	119,081
July		168,558	157,169	86,523
Aug.		161,426	145,640	75,827
Sept.		172,499	129,475	95,169
Oct.		152,511	132,924	106,582
Nov.		186,956	127,782	122,290
Dec.		177,844	150,170	134,415

Yearly Totals

1923	1,992,595
1922	1,986,297
1921	2,213,042
1920	4,961,851
1919	4,239,837
1918	5,338,037
1917	6,441,760
1916	6,105,881
1915	3,532,606
1914	1,549,554
1913	2,745,535
1912	2,947,596
1911	2,187,809
1910	1,540,895

*Excluding machinery.

Important Steel Price Changes

At the end of 1920 prices of independent steel producers had declined to Industrial Board schedule of March 21, 1919, to which U. S. Steel Corporation had meanwhile adhered. These prices are given under date of January 1, 1921 subsequent changes being in open market. Only the more important changes are listed.

Bars

Jan. 1, 1921	2.35	May 17	1.60
Feb. 11	2.00	July 26	1.70
Apr. 13	2.10	Aug. 9	1.80
June 24	2.00	Aug. 25	1.90
July 5	1.90	Sept. 27	2.00
July 26	1.75	Jan. 31, 1923	2.10
Sept. 9	1.65	Feb. 16	2.20
Sept. 27	1.60	Feb. 23	2.25
Nov. 9	1.55	April 2	2.35
Dec. 19	1.50	April 8, 1924	2.30
Feb. 18, 1922	1.40	April 27	2.40
Mar. 29	1.50	April 30	2.20
		June 24	2.15

Plates

Jan. 1, 1921	2.65	April 5	1.50
Feb. 10	2.40	May 25	1.60
Feb. 17	2.25	July 26	1.70
Feb. 23	2.10	Aug. 9	1.80
April 13	2.20	Aug. 25	2.00
June 10	2.00	Jan. 19, 1923	2.10
July 15	1.90	Feb. 9	2.20
July 26	1.85	Feb. 23	2.25
Aug. 25	1.80	Mar. 21	2.35
Sept. 2	1.75	April 2	2.45
Sept. 9	1.65	April 27	2.50
Sept. 27	1.60	Feb. 29, 1924	2.40
Oct. 27	1.55	April 8	2.30
Nov. 9	1.50	April 30	2.20
Feb. 18, 1922	1.40	June 20	2.15

Shapes

Jan. 1, 1921	2.45	Mar. 9	1.50
Feb. 11	2.25	May 25	1.60
Feb. 17	2.20	July 26	1.70
Feb. 28	2.10	Aug. 9	1.80
April 13	2.20	Aug. 25	2.00
June 24	2.00	Jan. 19, 1923	2.10
July 22	1.90	Feb. 16	2.20
July 26	1.85	Feb. 23	2.25
Aug. 25	1.80	Mar. 21	2.35
Sept. 2	1.75	April 2	2.45
Sept. 9	1.70	April 27	2.50
Sept. 26	1.65	Mar. 24, 1924	2.40
Sept. 27	1.60	April 8	2.30
Dec. 21	1.50	April 30	2.20
Feb. 18, 1922	1.40	June 20	2.15

Wire Nails

Jan. 1, 1921	3.25	Dec. 21	2.50
Feb. 17	3.10	Feb. 21, 1922	2.40
Mar. 4	3.00	Aug. 30	2.60
April 13	3.25	Sept. 27	2.70
June 1	3.00	Feb. 1, 1923	2.80
July 9	2.75	Mar. 26	2.90
Sept. 12	2.90	Apr. 20	3.00
Dec. 9	2.75	May 16	2.90

Steel Pipe

Jan. 1, 1921	57½%	Dec. 16	71%
Mar. 24	58½%	Aug. 23, 1922	68%
Apr. 7	59½%	Oct. 19	66%
Apr. 13	62½%	Feb. 3, 1923	64%
July 9	64½%	Apr. 19	62%
Sept. 16	68½%		

Black Sheets

Jan. 1, 1921	4 35	Nov. 25	3 00
Feb. 11	4 15	Apr. 7, 1922	3 15
Mar. 8	4 00	Aug. 14	3 35
Mar. 17	3 85	Feb. 23, 1923	3 60
April 13	4 00	Mar. 27	3 75
July 5	3 50	April 3	4 00
July 26	3 25	April 26	3 85
Aug. 1	3 00	Oct. 16	3 75
Aug. 25	2 75	April 15, 1924	3 70
Sept. 22	3 00	May 7	3 65
Nov. 1	2 90	May 20	3 60

Tin Plate

Jan. 1, 1921	7 00	Mar. 21, 1922	4 60
April 13	6 25	April 5	4 65
June 7	6 00	April 24	4 70
June 14	5 75	May 17	4 75
Aug. 1	5 25	Feb. 26, 1923	5 00
Sept. 15	5 00	Mar. 23	3 00
Sept. 19	4 75	Mar. 27	5 50

Blue Annealed Sheets

Jan. 1, 1921	3 55	Apr. 7, 1922	2 40
Feb. 11	3 35	Aug. 14	2 50
Feb. 16	3 20	Sept. 20	2 60
Mar. 8	3 00	Nov. 23	2 50
Apr. 13	3 10	Feb. 23, 1923	2 75
June 10	2 90	Mar. 23	3 00
July 6	2 65	April 3	3 25
Aug. 2	2 40	April 26	3 00
Aug. 16	2 25	April 1, 1924	2 85
Sept. 22	2 50	May 7	2 80
Nov. 1	2 25	May 20	2 75

Galvanized Sheets

Jan. 1, 1921	5.70	Apr. 7, 1922	4.15
Feb. 11	5.55	Aug. 14	4.35
Feb. 16	5.35	Feb. 23, 1923	4.75
Feb. 24	5.25	Mar. 20	5.00
Mar. 8	5.10	April 3	5.25
Mar. 17	5.00	April 26	5.00
June 22	4.75	Nov. 1	4.90
July 5	4.50	Nov. 13	4.85
July 22	4.25	Dec. 11	4.90
Aug. 2	4.00	Dec. 26	5.00
Aug. 25	3.75	Feb. 29, 1924	4.90
Sept. 22	4.00	April 23	4.85
Nov. 1	3.90	May 7	4.80
Nov. 25	4.00	May 20	4.75

[fol. 4529] In United States District Court, Southern District of New York

[Title omitted]

Stipulation re Transcript of Record

It is hereby stipulated and agreed that the foregoing is a true transcript of the record of the said District Court in the above-entitled matter as agreed on by the parties.

Dated April 28, 1926.

Shearman & Sterling, J. H. G., Attorney- for Plaintiff & Appellee. John Holley Clark, Jr., P. E. B., Attorney for Defendant & Appellant.

Approved: Francis N. Winslow, U. S. District Judge.
April 28, 1926.

[fol. 4530] Clerk's certificate to foregoing transcript omitted in printing.

[fol. 4531] In Supreme Court of the United States

Statement of Points to be Relied Upon and Stipulation to Print the Entire Record—Filed May 12, 1926

It is hereby stipulated and agreed that the transcript of the record in the above entitled matter, as agreed upon by the parties and as docketed in the office of the clerk of this court, be printed in full.

Dated New York, April 29, 1926.

Shearman & Sterling, J. H. G., Solicitors for Appellee-Plaintiff. John Holley Clark, Jr., P. E. B., Solicitor for Appellant-Defendant.

[fol. 4532]To the Honorable the Supreme Court of the United States:

The defendant appellant above named respectfully submits the following Statement of Points, upon which he will rely, in the above entitled cause pursuant to rule 11, of the rules of the Supreme Court of the United States:

1. Every presumption is in favor of the validity of the Statute, and the burden of proof is upon the party assailing such Statute to establish its unconstitutionality beyond a reasonable doubt.

2. The Statute should not be declared confiscatory until plaintiff has experimented with the statutory rate.

3. The operating expenses of the plaintiff company as found by the district court were excessive and unreasonable. The net operating expenses of the plaintiff company, after deducting the miscellaneous operating revenue, do not warrant a finding that it cost more than 73.65 cents per M to make and distribute gas.

4. The rate base as found by the court below was excessive and unreasonable. A proper rate base for the plaintiff [fol. 4533] company should not have exceeded the sum of $94,000,000.

a. The allowance of the court below for working capital was excessive and unreasonable.

b. In this case upon all of the circumstances there should be no separate and additional allowance for "going value" as there is no historical basis for such allowance.

c. A grossly inadequate allowance was made for depreciation.

d. There is no justification for an allowance for "structural overheads" beyond those appearing in the books and included in so-called investment.

5. The statute in question should not be declared *in*constitutional unless the Court finds that the rate of return would have been less than six per cent.

6. The statute should not be held unconstitutional because it violates a so-called existent contract between the complainant company and the Public Service Commission.

7. The price and standard provisions of Chapter 899 of the Laws of 1923 are so independent of each other that this Court should declare them separable, and in the event the standard provision is found unconstitutional the price provision may still stand.

8. Each and all of the Assignment of Errors as filed with the clerk of the court below, setting out separately and particularly each of the Errors asserted.

Dated May 11, 1926.

[fol. 4534] Yours, etc., John Holley Clark, Jr., Solicitor for Defendant-Appellant Ottinger, 120 Broadway, New City. John Holley Clark, Jr., Charles E. Buchner, Of Counsel.

[fol. 4535] Copy received May 11, 1926. Shearman & Sterling, Solicitors for Plff.-Appellee.

[fol. 4536] [File endorsement omitted.]

Endorsed on cover: File No. 31,886. D. C. U. S., Southern New York. Term No. 357. Albert Ottinger, as Attorney General of the State of New York, appellant, vs. Consolidated Gas Company of New York. Filed April 30th, 1926. File No. 31,886.